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ABSTRACT

A manual to help students analyze public policy issues in a systematic and well-informed way is presented, with emphasis on the conceptual, information-gathering, and analytical skills required. The text is intended for two major audiences: (1) introductory college-level courses in political science, public policy, or social science research; and (2) high school courses in current events, problems of democracy, or citizenship. Consideration is given to key concepts to help the student understand public policy issues, goal conflicts and public policy, and different types of public policy analysis. Also covered are: how to use the library and surveys as well as interviewing to gather essential data; how to organize and present quantitative information on public policy issues; how to define a social problem, identify alternative public policies, and evaluate the impact of the policy; and how to determine the steps required to implement a public policy and assess the chances of success. Examples are offered for each skill area, and exercises help the student master the skills. A model for forecasting and developing a strategy to get political support for the proposal is also considered. Finally, students are required to analyze a single policy issue of their choice. (SW)

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PUBLIC POLICY STUDY SKILLS MANUAL

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Test Edition

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Policy Studies Associates was established in 1976 to strengthen learning resources in order to help students develop policy analysis skills and techniques and apply these to important public issues. Toward this end, two series of learning packages have been published, designed especially for undergraduate use — Policy Sciences Series, which emphasizes techniques in policy analysis, and Policy Issues Series, which concentrates on specific public policy questions.

An operating program of the Council on International and Public Affairs, Policy Studies Associates is a cooperative nonprofit undertaking of a small group of faculty members and others concerned with improving the quality of education on public policy issues in schools, colleges, and universities.

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ABOUT THIS MANUAL

This manual will help you learn how to analyze public policy issues in a systematic and well-informed way. It provides you with the conceptual, information-gathering, and analytic skills that are required to make intelligent judgments about existing and proposed public policies. The manual does not supply you with specific information about past, present, or future public policy issues. You will have to acquire that information on your own. Real public policy issue materials are used to illustrate specific skills, not to provide a comprehensive picture of any particular issue.

This manual is organized into the following parts:

I. Basic Concepts--the terms you will need to identify public policy issues and to undertake systematic analysis with respect to them.

II. Information-Gathering Skills--how to use the library and surveys as well as interview skills to gather essential data.

III. Statistical Analysis Skills--how to organize and present quantitative information on public policy issues.

IV. Formulation and Evaluation of Public Policy Issues--how to define a social problem, identify alternative public policies and evaluate the impact of the policy.

V. Implementing a Public Policy--how to determine the steps required to implement a public policy and assess the chances of success.

Each of these parts contains the following:

A. A brief explanation of the skill.

B. Examples demonstrating how the skill is used.

C. One or more exercises for you to complete that should help you master the skill

In parts IV and V of the manual you will be required to focus on a public policy issue of your choice.

PART ONE: BASIC CONCEPTS

This section of the manual provides you with the working definitions of several key concepts that you will need to master public policy analysis tasks. Each chapter is broken down into several steps:

- Chapter 1: Components of Public Policy Issues
  - Step 1: Identify Public Policies
  - Step 2: Identify Public Policy Issues
  - Step 3: Classify Components of Public Policy Issues
- Chapter 2: Goal Conflicts and Public Policy
  - Step 1: Identify Public Policy Goals
  - Step 2: Identify Private and Public Interests
  - Step 3: Identify Goal Conflicts in Public Policy Issues
- Chapter 3: Different Types of Public Policy Analysis
  - Step 1: Identify the Five Types of Analysis
  - Step 2: Assess the Monitoring of Social Conditions
  - Step 3: Assess the Explanations of Social Conditions
  - Step 4: Assess the Forecasts of Social Conditions
  - Step 5: Evaluate Social Conditions
  - Step 6: Assess Public Policy Prescriptions

CHAPTER 1

COMPONENTS OF PUBLIC POLICY ISSUES

This chapter introduces you to the basic terminology used to identify and classify public policy issues.

OBJECTIVE

On completion of this chapter, you should be able to identify different kinds of public policy issues and recognize the social conditions, players, and public policies that are relevant to any given issue.

INTRODUCTION

Every day you are bombarded by radio, television, and newspaper coverage of actions by government leaders. You may pay attention to this coverage or you may ignore it. But whether you pay attention or not, many of these reported actions and even more that never become major news stories frequently determine the quality of your life now and in the future. If the superintendent of schools decides to increase the school day by a half hour, you would have no trouble seeing its relevance to the lives of students and teachers. An announcement by the federal government that it intends to remove the state property tax as a federal income tax exemption may be just as relevant. The relevance would be crystal clear if you were to realize that the consequence of that decision was to increase your parents' income tax by $500—the amount they had promised you to help you buy a used a car. From a broader point of view, such a decision by the federal government might weaken the ability of your state government to collect taxes and maintain its current level of spending on roads, schools, or parks. Therefore, it is not surprising that proposed government action, such as altering tax policy, generates lots of controversy. When an existing or proposed government action becomes controversial and has a broad impact on society, it becomes a public policy issue.

The purpose of this book is to help you analyze public policy issues and assess the impact of existing and proposed public policies on your own life and on the lives of others. This chapter represents the first step in acquiring the skills of public policy analysis. It helps you identify public policy issues and introduces you to the basic components of those issues. Once you have worked through the exercises in this book, the news coverage of what government leaders do or don't do will seem much more relevant.

Step 1.1: Identify Public Policies

A public policy is a government action. More specifically it is the actual or proposed government action that is intended to deal with a given social condition. The public policy pertaining to the 55-mile speed limit includes the basic law, passed by Congress and signed by the President, the regulations concerning enforcement issued by the Department of Transportation, and the state decisions about how to enforce the law.

The action can be taken by elected or appointed officials who have the authority to act for the government. It can take the form of legislation, administrative acts, or judicial decisions.

A public policy which takes the form of legislation requires that the legislature, usually acting in cooperation with an executive, enacts a law that is intended to make people follow a specified form of behavior. A law raising the drinking age from 19 to 21 is intended to stop people between the ages of 19 and 21 from consuming alcoholic beverages. Notice that a law does not necessarily mean that people will behave differently. Governments cannot make people do anything. They can only tell them what is legal behavior and punish them if they act illegally. In the United States, national laws are made by the congress with the president having a partial power to veto them.

Since laws indicate only how people should behave, a public policy can be effective only if someone enforces or administers the law. Administrative acts are undertaken only in conformance with laws that have been passed. Nevertheless, administrative acts are often even more important than the laws themselves. If the police decide not to enforce vigorously the 21 year old drinking age, the change in the law from 19 to 21 will have little direct effect. Administrative actions frequently involve the allocation of funds or the provision of services that are indicated in general terms by law. For example, the schedule for collecting trash is a decision made by the Department of Sanitation. Administrative decisions are made by the chief executive and civil servants who work for the chief executive.

Judicial decisions are the application of the law to a specific situation and, therefore, have the effect of both administrative and legislative acts. Judicial decisions made by courts can also be a form of public policy. Existing laws may be declared unconstitutional which returns the legal situation back the way it was before the law was passed. Also, judges may issue sentences to law violators in such a way as to either increase or decrease the force of the law. For example, since the early 1980's, driving laws have resulted in harsher penalties in part because judges have gotten tougher.

It should be clear from the above discussion that public policies frequently involve a combination of legislative, administrative, and judicial decisions. Although, as the answers to Exercise 1.1 in our example show, it is possible to make distinctions among the three types, it is most useful to think about the legal, administrative, and judicial aspects of a public policy.

Another distinction that needs to be made is among different geographical jurisdictions. A geographical jurisdiction is defined as the territory over which authority is exercised in the making of public policy. (Lawyers and judges also talk about other kinds of jurisdictions such as over certain kinds of laws like civil versus criminal or certain kinds of people like juveniles versus adults. However, for discussion here we are talking about territorial jurisdiction.) Four levels of jurisdiction are most often used in discussions of public policies because they match four geographical levels over which governments act. They are:

- Local—village, town, or county
- State—one of the fifty in the United States. Most other countries have some similar region, such as provinces
- National—policies applying to the entire United States
- International—policies involving two or more national governments

On the next page is an example of each type of public policy at each level of jurisdiction. Following that page is a blank table for you to complete with your own examples.

EXAMPLE FOR EXERCISE 1.1
Identify Public Policies

IN THE TABLE BELOW PROVIDE EXAMPLES OF PUBLIC POLICIES THAT TAKE THE FORM OF EACH OF THE THREE TYPES—LEGISLATION, ADMINISTRATIVE ACTS, OR JUDICIAL DECISIONS IN EACH OF THE FOUR GEOGRAPHIC JURISDICTIONS.

TYPES OF PUBLIC POLICIES

JURISDICTION	LEGISLATION	ADMINISTRATIVE ACTS	JUDICIAL DECISIONS
LOCAL COMMUNITY	City council limits the size of signs merchants can display	Local zoning board permits construction of an apartment building	Judge issues an injunction against building a shopping mall in a zoned area
STATE	Legislature passes and Governor signs law requiring drivers to wear seat belts	State police establish roadblocks to check for DWI	New York State Court of Appeals upholds state law requiring deposits on bottles
NATIONAL	Congress passes and President signs law requiring 18 year old males to register for the draft	Defense Department expands training facilities at Fort Drum, New York	U.S. Supreme Court declares the "separate but equal" doctrine in public schools to be unconstitutional
INTERNATIONAL	All governments agree by treaty that foreign diplomats are exempt from arrest	The members of OPEC (Organization of Petroleum Export-Countries) agree to sell oil at $29 a barrel	International tribunal decides claims on Iranian government by an American business

EXERCISE 1.1
Identify Public Policies

IN THE TABLE BELOW PROVIDE EXAMPLES OF PUBLIC POLICIES THAT TAKE THE FORM OF EACH OF THE THREE TYPES—LEGISLATION, ADMINISTRATIVE ACTS, OR JUDICIAL DECISIONS IN EACH OF THE FOUR GEOGRAPHIC JURISDICTIONS.

TYPES OF PUBLIC POLICIES

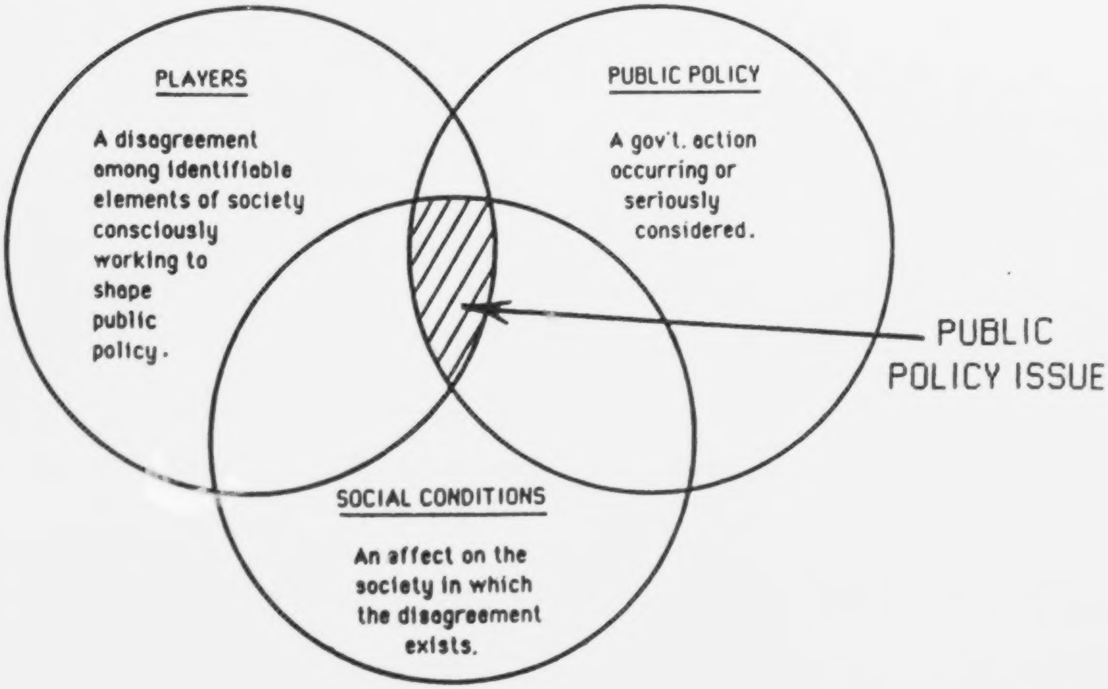
JURIS-DICTION	LEGISLATION	ADMINISTRATIVE ACTS	JUDICIAL DECISIONS
LOCAL COMMUNITY			
STATE			
NATIONAL			
INTERNATIONAL			

STEP 1.2: Identify Public Policy Issues

To determine if a situation is a public policy issue, you would have to say "yes" to all three of these questions:

1. Is a public policy involved?
2. Is the policy intended to have an impact on social conditions?
3. Do players disagree over the policy or the social conditions?

Figure 1.1: Components of Public Policy Issues


PLAYERS
A disagreement among identifiable elements of society consciously working to shape public policy.
PUBLIC POLICY
A gov't. action occurring or seriously considered.
SOCIAL CONDITIONS
An affect on the society in which the disagreement exists.
PUBLIC POLICY ISSUE

Consider the following three situations. Each of them contains one element of our definition, but none contains all of the three required for classification as an issue.

1. Citizens of Columbus, Ohio accept a slight increase in their property taxes.
2. The mayor of Chicago, Illinois runs for re-election.
3. A sparse rainfall in parts of two Southern states creates hardship for many farmers.

(1) Raising property taxes in Columbus, Ohio constitutes a public policy dealing with a social condition. But without any disagreement over the decision, it does not become a public issue. (2) A mayor's re-election campaign may involve disagreement among important elements of the city's voting public regarding the governmental actions that will follow as a consequence of the election results. However, the election itself does not represent a "social condition." (3) Finally, the low rainfall indicates a social condition and some desire for action on the part of those farmers affected, but no widespread disagreement; in such a case the likelihood of a public policy initiative by the government is extremely low.

Any of the three incidents could evolve into a public policy issue. To illustrate, we have changed the examples so that they satisfy the three requirements for being considered as public policy issues.

1. Many citizens of Columbus oppose an attempted increase in property taxes.
2. The mayor has declared that his re-election will signify support for a policy of extensive urban renewal in all decaying urban areas. His opponents oppose him primarily on this declaration.
3. A substantial increase in Federal or State governmental aid is requested to assist the farmers affected by the drought, and some people feel the government can't afford to increase the aid levels.

The point is that only when all three characteristics occur simultaneously can we say a public issue exists.

EXAMPLE FOR EXERCISE 1.2
Identify Public Policy Issues

IDENTIFY THREE PUBLIC POLICY ISSUES AND BRIEFLY DESCRIBE HOW EACH MEETS THE ESSENTIAL CRITERIA: 1) DISAGREEMENT AMONG PLAYERS, 2) SOCIAL CONDITIONS, 3) PUBLIC POLICY.

ISSUE 1: Should New York State have a twenty-one year old drinking age?

CRITERIA:

This issue meets the three criteria outlined above. It consists of a potential policy (a proposed piece of legislation to require an individual to be at least 21 years old to consume alcoholic beverages), a disagreement among identifiable groups in the society (representatives of the liquor industry and groups concerned with alcohol-related accidents) and social conditions (number of traffic fatalities related to alcohol and consumption of alcoholic beverages).

ISSUE 2: Should the Federal Government eliminate the exemption for state taxes on federal income tax?

CRITERIA:

The issue meets the three criteria outlined above. It consists of a disagreement (states with high taxes and states with low taxes), social conditions (the change in disposable income for individuals in these states), and public policy (a proposed piece of legislation abolishing the exemption for state taxes on federal income tax).

ISSUE 3: Should public schools allow time for prayer?

CRITERIA:

The issue consists of disagreement (students and parents who feel their constitutional rights are being violated and schools that do allow time for prayer), social conditions (the attitude of citizen who fear the country is becoming religious in nature or the opposite, Godless), an public policy (will the courts order this prayer stopped or not).

EXERCISE 1.2
Identify Public Policy Issues

IDENTIFY THREE PUBLIC POLICY ISSUES AND BRIEFLY DESCRIBE HOW EACH MEETS THE ESSENTIAL CRITERIA: 1) DISAGREEMENT AMONG PLAYERS, 2) SOCIAL CONDITIONS, 3) PUBLIC POLICY.

ISSUE 1:

CRITERIA:

ISSUE #2:

CRITERIA:

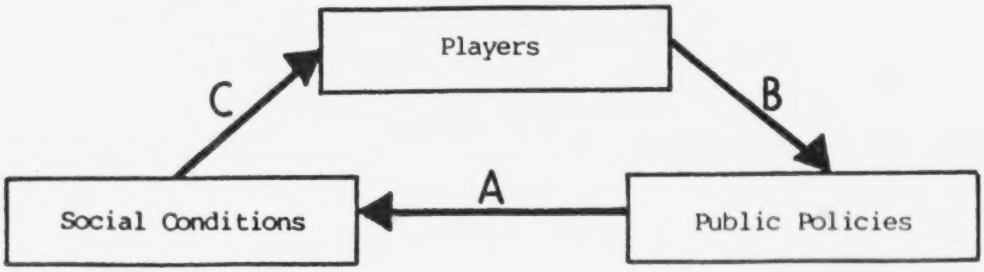
ISSUE #3:

CRITERIA:

STEP 1.3: Classify Components of Public Policy Issues

The three criteria discussed in Step 1.2 also serve as the basis of the components of public policy issues. Figure 1.2 illustrates the components. Each is described below.

Figure 1.2: Basic Categories of Classifying Information on Public Policy Issues



PUBLIC POLICIES

Public policies are existingg or proposed government actions that are the focal point for the issue. This component has been thoroughly described in Stepl.1. Please review it.

SOCIAL CONDITIONS

A social condition may include the physical environment, people's behavior, and people's attitudes. Social conditions are usually described by economic and social indicators and can be traced to the public policy in question. For example, the 55-mile speed limits have an effect on a variety of social conditions including the amount of gasoline consumed and the number of automobile accidents. However, physical indicators such as these measure only some of the social conditions effected by the law. The attitudes of people in the society are also a social condition. For example, many people believe they are unfairly restricted by the 55-mile speed limit; these beliefs, in turn, create ill-feeling toward the government and even a willingness to break the law. When identifying social conditions effected by a public policy don't forget to include people's attitudes as well as economic and physical indicators.

PLAYERS

Players are individuals, groups, or institutions that work to shape public policies. Players can be elected officials, appointed officials, organized groups, or a private individual that seeks to shape policy.

Unorganized categories of people such as "the public," "voters," "consumers," and "taxpayers," are not automatically players. To be players, these people have to take an active role in influencing players that are directly involved in a public policy issue. Do not make the mistake of assuming people are players merely because they are affected by the public policy. Dog owners are affected by leash laws, but they are not players unless they organize to try to affect policy. To be a player a person must be actively attempting to influence the public policy process. For example, the players involved in the speed limit policy are the legislators, the President, an official of the Department of Transportation, the state police, a truckers' association that opposes the law, and the AAA, which supports the law.

When analyzing any public policy issue, you should be able to identify not only the public policy, the social conditions, and the players but also the relationship among the three components. You should automatically ask yourself the three questions suggested by Arrows A, B, and C in Figure 1.2: (1) What is the expected impact of the public policy on the social conditions (ARROW A)? (2) Which players support and oppose the public policy (ARROW B)? and (3) How do social conditions stimulate the behavior of players (ARROW C)?

ARROW A

The intended or actual impact of a public policy on social conditions. For example, the 55-mile speed limit reduces gasoline consumption and cuts down traffic fatalities.

ARROW B

The position of a player on public policy. For example, the AAA favors the 55-mile speed limit.

ARROW C

The condition in the society that motivates players to support or oppose this public policy. For example, a massive increase in the price of oil in the mid-1970s motivated Congress to implement the 55-mile speed limit.

The following page shows an example of components described above to help organize information about a public policy issue. An exercise to be completed by you comes after the example.

EXAMPLE FOR EXERCISE 1.3
Classify Components of Public Policy Issues

SELECT AN ARTICLE RELEVANT TO A PUBLIC POLICY ISSUE FROM A NEWSPAPER OR NEWS MAGAZINE. USING THE FOLLOWING FORMAT, IDENTIFY THE COMPONENTS, AS OUTLINED IN FIGURE 1.2. ATTACH A COPY OF THE ARTICLE TO YOUR ANSWERS. IN PROVIDING INFORMATION ON RELATIONSHIPS, USE THE INFORMATION YOU PROVIDE ON COMPONENTS.

POLICY:

Reduce cost-of-living increase for social security payments

SOCIAL
CONDITIONS:

a. Cost of social security program

b. Size of the budget deficit

c. Disposable income for individuals on social security

PLAYERS:

a. President

b. Democrats in Congress

c. American Association of Retired People (AARP)

ARROW A:

Reducing the cost-of-living increase for social security payment will help reduce the size of the budget deficit

ARROW B:

The President favors a reduction in the cost-of-living increase for social security payments

ARROW C:

The growing budget deficit has motivated some members of Congress to work on behalf of reduced expenditures for social security.

EXERCISE 1.3
Classify Components of Public Policy Issues

SELECT AN ARTICLE RELEVANT TO A PUBLIC POLICY ISSUE FROM A NEWSPAPER OR NEWS MAGAZINE. USING THE FOLLOWING FORMAT, IDENTIFY THE COMPONENTS, AS OUTLINED IN FIGURE 1.2. ATTACH A COPY OF THE ARTICLE TO YOUR ANSWERS. IN PROVIDING INFORMATION ON RELATIONSHIPS, USE THE INFORMATION YOU PROVIDE ON COMPONENTS.

POLICY:

SOCIAL CONDITIONS:

a.

b.

c.

PLAYERS:

a.

b.

c.

ARROW A:

ARROW B:

ARROW C:

SUMMARY

This chapter introduced the basic components of a public policy issue. It also demonstrated use of these components as categories for organizing information about a public policy issue. The chapter also illustrated a means for thinking about the relationships among the organizing categories.

By now you should be able to read material on a public policy issue and relate it to each of three categories. Table 1.1 summarizes what you should have learned in this chapter.

TABLE 1.1: REVIEW

CATEGORY	DEFINITION	SKILLS	EXAMPLES
Social Conditions	The conditions in society that have generated the issue.	Identify what conditions in the society have generated the issue.	● inflation ● unemployment ● crime rate ● attitudes toward police
Public Policies	The actual or proposed government actions that are intended to deal with the social conditions.	Describe public policies or government actions that are aimed at dealing with social conditions.	● price controls ● job corp program ● increase police budget ● student loan program ● school busing
Players	The individuals, or organized groups, or institutions that consciously work to shape public policy.	List players who consciously seek to shape public policy. Include players on all sides of an issue.	● Ralph Nader ● Mayor ● League of Women Voters ● Heritage Foundation ● Secretary of Defense
Arrow A	The possible impact of the policy on social conditions	Indicate possible relationship between policy and social conditions	● 55-MPH reduces gas use ● strict enforcement raises drug prices
Arrow B	Players who support or oppose public policy	Identify crucial players and their orientation to the policy	● Bar owners oppose 21 yr. old drinking age ● Environmental groups oppose DDT use
Arrow C	Social conditions stimulate players players to act	Identify which players will react to specific social conditions	● Gas shortage motivates President to take corrective action

CHAPTER 2

GOAL CONFLICTS AND PUBLIC POLICY

The purpose of this chapter is to help you identify the different kinds of goals that motivate players on public policy issues and the conflict that develops out of those different goals.

OBJECTIVE

On completion of this chapter, you should be able to identify goals that motivate players on public policy issues, distinguish between private and public interests, and describe goal conflicts among players over specific public policy issues.

INTRODUCTION

Did you ever wonder why some people and groups get so upset about public policy issues and why many issues never seem to be resolved? The reason for the intensity of feeling and the difficulty in resolution is that players are motivated by different interests and different conceptions of what is right. These motivations are frequently very strong, and they may set in motion intense conflict. You have no difficulty in understanding why people fight for food, shelter, or water. These are resources, and the gain for one represents a loss for another.

A similar reason causes players to engage in conflict over public policy issues. Lower taxes for one group might mean higher taxes for another. Prayer in school would represent a gain for those who support it, but a loss for those opposed to prayer in school. The seat belt law is supported by those who see the cost of insurance being reduced and opposed by those who see their freedom lost. Although the "fight" is not usually in physical terms, it is nonetheless just as intense. In extreme cases, it can result in violence. For example, protests over America's Vietnam policies in the 1960s and early 1970s sometimes led to violence.

Goal conflicts over public policy issues are more complex than the goal conflicts over food, shelter, or mates. In cases of physical conflict, there are only two sides and little room for compromise. Most public policy issues, however, involve many players each with slightly different goals. Some goals create conflict, and some promote cooperation. On income tax reform, for example, some provisions might benefit the rich, others the middle class, and still others the poor. The feeling that the system must be fair—which is felt most strongly among the poor and middle class—is in conflict with the feeling among the rich and some of the middle class that the system must help to stimulate business. In tax issues, players disagree over some things and agree on others.

Despite this complexity, underlying motivations drive players in their orientation toward public policy issues. In this chapter, we will call these motivations "goals," and we will look at the different kinds of goals which motivate players and how those goals contribute to the controversy inherent in public policy issues.

STEP 2.1: Identify Public Policy Goals

It is important for the analyst of public policy issues to be clear about the goals of players. When applied to public policy issues goals are defined as "social conditions preferred by one or more players." Whether acting as individuals or groups, players seek public policies that:

- Promote social conditions they consider desirable.
- Eliminate and or minimize social conditions they consider undesirable.

For example, farm groups seek public policies that increase the income they receive from their products. The Audubon Society seeks to make the environment safer for birds. The Public Health Service seeks to reduce the risk of the population from disease.

It is useful to examine the motivations of a variety of players when exploring the goals underlying a public policy issue. One initial approach is to look at a specific public policy proposal and identify a goal that motivates supporters of the policy and a goal that motivates the opposition. You can determine these goals by examining what the players say and deducing their goals from what you know about their own self-interests and view of the world.

EXAMPLE FOR EXERCISE 2.1
Identify Public Policy Goals

IDENTIFY A PUBLIC POLICY AND ONE GOAL OF THE PLAYERS WHO SUPPORT AND WHO OPPOSE THE POLICY.

PUBLIC POLICY:

Mandatory seat belt law.

PLAYERS SUPPORTING POLICY SEEK TO:

Reduce number of traffic fatalities.

PLAYERS OPPOSING POLICY SEEK TO:

Reduce government interference in everyday lives.

EXERCISE 2.1
Identify Public Policy Goals

IDENTIFY A PUBLIC POLICY AND ONE GOAL OF THE PLAYERS WHO SUPPORT AND WHO OPPOSE THE POLICY.

PUBLIC POLICY:

PLAYERS SUPPORTING POLICY SEEK TO:

PLAYERS OPPOSING POLICY SEEK TO:

STEP 2.2: Identify Private and Public Interests

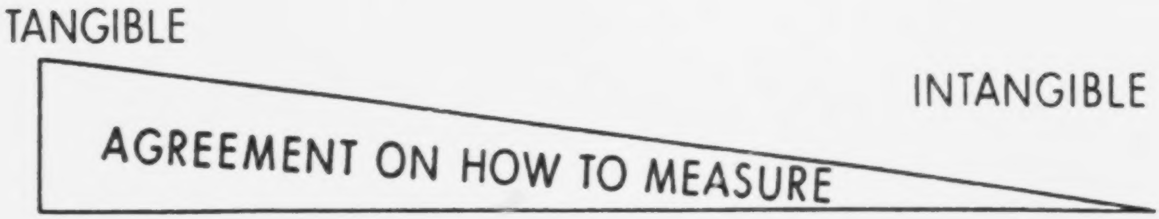
The goals pursued by players can be justified on two different grounds—private interests and public interests. Under the justification of private interest, the player pursues a goal because it will benefit the player directly. Private interests often involve wealth in one way or another. Corporations want lower taxes, farmers want subsidies for their products, police officers want higher salaries. Some private interests represent non-economic goals. Homeowners want the best street maintenance on their own block, for example. The key is that the goal the player seeks is a benefit received directly and exclusively by the player.

Under the justification of public interests, the player pursues a goal because it feels that the society as a whole will benefit even though one segment of the society might benefit somewhat more than another. Examples of public interest range from preserving the national security to building an interstate highway. In both cases, everyone in the society benefits or can benefit from the achievement of the goal. Remember that the "society" to which the public interest refers is related to the jurisdiction of the public policy in question (e.g., the local community, the state, the nation).

Public interest can be divided into two general types—relatively tangible (consensus exists as to how to measure) and relatively intangible (little consensus exists regarding how to measure). Tangible public interests are based on those social conditions that can be effectively measured in an agreed-upon, systematic fashion. Examples include the quality of air, the health of the population, and economic conditions such as unemployment, inflation, and economic growth. Despite some disagreement over what is the best measure, a tangible public interest can be systematically measured in one way or another with general acceptance of the measure by all players. In contrast, intangible public interests cannot be as easily measured in a systematic and agreed-upon way. Nontangible public interests are such conditions as individual freedom and justice. We can describe some social conditions that indicate thriving individual freedom and justice, and other conditions that indicate an absence of freedom and justice, but it would be very difficult to agree on systematic measures of such conditions. The line between tangible and intangible public interests is not absolute, but certain interests are clearly much easier to measure than others.

Although we have presented tangible and intangible as two separate and distinct categories, it would be more precise to identify them as two separate points on a continuum. The measurement of even the most concrete social condition is subject to some disagreement, and even the most abstract social condition can be measured by asking experts to provide a subjective judgment. However, for purposes of ease of communication, we have made the distinction in our presentation.

Figure 2.1: Measuring Tangible and Intangible Public Interests



Despite the difficulty in measuring intangible public interests, they are frequently powerful influences on the behavior of players. They often rely on views that are not likely to change. Issues that are persistent, difficult to resolve, and tension producing such as capital punishment, the legality of abortion, school prayer, and civil rights frequently evolve out of different deeply held views of what is right and wrong.

Some of the most powerful intangible public interests are:

- Individual freedom
- National security
- Social order
- Equality among individuals
- Justice for individuals
- Efficiency of government operations
- Legitimate decision-making process

A variety of definitions and interpretations are associated with these public interests. Individual freedom obviously does not mean that individuals can do anything they want. They cannot break the law to satisfy individual desire. Definitions and applications of individual freedom are continually changing as attitudes and social conditions change.

National security is usually thought of as the ability of a country to defend itself against the domination of a foreign army or from physical destruction. It is a difficult concept to measure because modern military technology has made even the strongest countries in the world vulnerable to physical destruction. Preventing that destruction now rests on deterring attacks from others and, therefore, depends on the attitudes of foreign leaders, which are extremely difficult to measure. This stance makes it hard to determine whether any given military expenditure, treaty, or event enhances or detracts from the national security of a country.

The remaining five intangible public interests are also difficult to measure. These terms appear throughout the history of all societies, continually requiring refinement of definition and application.

Order connotes the maintenance of existing community laws and relationships, but no community can exist without changing those laws and relationships.

Equality is grounded on the concept that each member of the community is equal to another member of the community, but no society has achieved such a condition (although some are closer to it than others).

Justice refers to the fair treatment of individuals by the government, others in the society, or before the law, but "fairness" is a fluid concept and is applied erratically.

Efficiency can be estimated in terms of resources required to accomplish a given objective, but the "soft" nature of most objectives make it easy for reasonable people to disagree over the expected efficiency of a given governmental policy.

Legitimate government decision-making is a widely-supported goal. That is, decisions should be reached in compliance with those legal and moral principles which in the United States are associated with the democratic process. However, few agree on the exact content of those principles and their application in specific situations even in democratic countries. In a non-democratic country, legitimacy is usually based on the esteem people hold for political leaders; in democratic societies legitimacy is usually generated by respect for institutions and procedures.

The existence of these seven public interests is evident in the Declaration of Independence. Table 2.1 on page 27 lists passages representing each of the seven public interests discussed.

All seven intangible public interests appear to provide general support for the position of the Declaration of Independence, yet it is possible to envision some conflict among them. In fact, the statement that "all men are created equal" was not reinforced by specific statements in the remainder of the document. We know from the record of the debate over the wording of the Declaration of Independence that the Southern colonies blocked an attempt by the Jeffersonian camp to refer to slavery as an evil. Similarly, it was possible to excuse some of the actions of King George on the grounds of the efficiency of governmental operations. Although these potential conflicts over public interests are relatively obscure in the Declaration, they almost always arise in discussions of public policy issues.

We need to make one final point about the general relationship between private and public interests. Any goal pursued by any player can be justified on grounds of both interests. Even though the Declaration of Independence made the argument for independence primarily on the grounds of public interests, it is clear that private interests were at work. The phrase "pursuit of happiness" in a sense is a statement that many private individuals and groups felt they could not derive the personal benefits they wanted under British rule. We also know, from studies of the period, that British policies restricting what could be manufactured and exported were an important motivation to businessmen in the colonies. To take a contemporary example, subsidies to help farmers keep out of debt can be justified as serving the private interests of farmers since such subsidies put money directly into their pocket. However, they can also be justified on public interest grounds. The argument is frequently made that the subsidies keep agricultural production strong and enable the United States to benefit economically and politically by providing food to other countries.

TABLE 2.1

Intangible Public Interests In The Declaration Of Independence

INTANGIBLE PUBLIC INTERESTS	QUOTATION FROM DECLARATION OF INDEPENDENCE
● Individual Freedom	"Life, Liberty and the Pursuit Happiness"
● National Security	"He is at this time transporting large armies of foreign mercenaries to complete the works of death, desolation and tyranny"
● Social Order	"He has excited domestic insurrections amongst us. . . "
● Equality among Individuals	"All men are created equal"
● Justice for Individuals	"For depriving us in many cases of the benefits of Trial by Jury"
● Efficiency of Government Operations	"He has [King George III] called together legislative bodies at places unusual, uncomfortable, and distant from the depository of Public Records"
● Legitimate Decision-making Process	"He has forbidden his Governors to pass Laws of immediate and pressing importance unless suspended in their operation till his Assent should be obtained; and when so suspended, he has utterly neglected to attend to them"

In general, public interest justifications are made more frequently and more openly than private interest justifications. The reason for this is simple. A player seeking to gain support for a policy can broaden its appeal by claiming the public interest is served. Cynics might say that the public interest is used as a cover-up for private interests. Such deception undoubtedly does occur, but the mere confusion of public and private interests does not necessarily mean that undesirable behavior is going on. Governments and people do take actions for the good of the society as a whole, and this sometimes helps some private interests and harms others.

The public policy analyst needs to examine both the private and public interest justifications made by players for any policy. The analyst cannot simply take at face value what players say but must consider the social and economic interests of players when judging their motivations. Ultimately, analysts themselves need to decide what they consider to be the private and public interests operating in a specific public policy issue so that they can make the evaluations and prescriptions necessary to reach a conclusion about a public policy issue.

EXAMPLE FOR EXERCISE 2.2
Identify Public and Private Interests

FOR A PUBLIC POLICY OF YOUR CHOICE, PROVIDE AN EXAMPLE OF A PRIVATE INTEREST, A TANGIBLE PUBLIC INTEREST, AND AN INTANGIBLE PUBLIC INTEREST THAT UNDERLIES THE POSITIONS OF A PLAYER SUPPORTING AND A PLAYER OPPOSING THE POLICY.

PUBLIC POLICY: Establish the 21-Year-Old Drinking Age in New York State

	SUPPORTING PLAYER	OPPOSING PLAYER
PRIVATE INTEREST:	Car owners will have reduced insurance rates	Alcohol industry will lose sales.
TANGIBLE PUBLIC INTEREST:	Alcoholism throughout society will be reduced.	Unemployment will increase.
INTANGIBLE PUBLIC INTEREST:	Social order will increase since alcohol consumption increases the chances of lawless behavior.	Unjust because if 18-year-olds are asked to fight for their country, they should be able consume alcohol.

EXERCISE 2.2
Identify Public and Private Interests

FOR A PUBLIC POLICY OF YOUR CHOICE, PROVIDE AN EXAMPLE OF A PRIVATE INTEREST, A TANGIBLE PUBLIC INTEREST, AND AN INTANGIBLE PUBLIC INTEREST THAT UNDERLIES THE POSITIONS OF A PLAYER SUPPORTING AND A PLAYER OPPOSING THE POLICY.

PUBLIC POLICY:

	SUPPORTING PLAYER	OPPOSING PLAYER
PRIVATE INTEREST:		
TANGIBLE PUBLIC INTEREST:		
INTANGIBLE PUBLIC INTEREST:		

STEP 2.3: Identify Goal Conflicts in a Public Policy Issue

The two previous exercises asked you to identify how differences in goals can lead to differences among players in supporting or opposing a particular public policy. Remembering that one of the three essential components of every public policy issues is the existence of disagreement among players over what public policy should be pursued, we need to look at the role of goal conflicts in public policy issues.

Disagreement can arise from three sources, all of which involve goals in one way or another:

1. Differences over goals, or at least the priority each side attaches to goals. Those supporting the mandatory seat belt law are motivated most highly by the public good of preservation of life while those opposing the seat belt law value individual freedom above the preservation of the number of lives that would be saved by the law. Both sides favor both goals, but assign different priorities to them.

2. Disagreement as to the interpretation of the same goal. Those supporting the legalization of abortion frequently claim they do so on the grounds of individual freedom--the freedom of women to choose whether or not they want to give birth. Those opposing the legalization of abortion frequently do so on the grounds that it deprives the infant of its individual freedom--the right to life.

3. Disagreement on the policy to achieve the goal. This disagreement arises between players who share the same goals. Some players who want to reduce crime (a public interest) say the only way to do it is to administer harsher penalties. Other players say the only way to reduce crime is to increase resources in rehabilitation and training programs.

Any or all of these three sources may contribute to disagreement among players over public policy issues.

EXAMPLE FOR EXERCISE 2.3
Identify Goal Conflicts in a Public Policy Issue

FOR A PUBLIC POLICY ISSUE OF YOUR CHOICE, COMPLETE THE FOLLOWING ITEMS.

PUBLIC POLICY ISSUE: Establishing a 21-year-old minimum drinking age.

1. IDENTIFY A MAJOR DIFFERENCE OVER GOALS BETWEEN PLAYERS. IDENTIFY AT LEAST ONE GOAL ON EACH SIDE.

   The major difference between those who support and those who oppose the law is that the former value the preservation of human life as the most important public interest while the latter value individual freedom (for those between 19 and 21) as the most important public interest.

2. IDENTIFY AT LEAST ONE GOAL THE OPPOSING PLAYERS HAVE IN COMMON, BUT DEFINE SUFFICIENTLY DIFFERENTLY THAT IT IS A SOURCE OF CONFLICT.

   Both sides would probably cite justice as a source for their position. Those supporting the bill would say it is unfair for innocent people to be harmed by drunk drivers. Such drivers would not be on the road if the minimum drinking age were 21. Those opposing the bill would say that it is unfair that individuals who are old enough to fight for their country are not old enough to consume alcohol.

3. IF THE PLAYERS DO SHARE AT LEAST ONE GOAL THAT THEY DEFINE IN THE SAME WAY, INDICATE IF THEY AGREE OR DIFFER OVER THE MEANS TO ACHIEVE THAT GOAL.

   Both sides would like to see as few traffic fatalities from drunk driving as possible. However, supporters of the bill would say that the 21 year drinking age is an effective way to reduce fatalities while those in opposition might say that other measures would be equally or more effective (e.g., stiffer jail terms).

EXERCISE 2.3
Identify Goal Conflicts in a Public Policy Issue

FOR A PUBLIC POLICY ISSUE OF YOUR CHOICE, COMPLETE THE FOLLOWING ITEMS.

PUBLIC POLICY ISSUE:

1. IDENTIFY A MAJOR DIFFERENCE OVER GOALS BETWEEN PLAYERS. IDENTIFY AT LEAST ONE GOAL ON EACH SIDE.

2. IDENTIFY AT LEAST ONE GOAL THE OPPOSING PLAYERS HAVE IN COMMON, BUT DEFINE SUFFICIENTLY DIFFERENTLY THAT IT IS A SOURCE OF CONFLICT.

3. IF THE PLAYERS DO SHARE AT LEAST ONE GOAL THAT THEY DEFINE IN THE SAME WAY, INDICATE IF THEY AGREE OR DIFFER OVER THE MEANS TO ACHIEVE THAT GOAL.

SUMMARY

This chapter has served to introduce the source of controversy in public policy issues—the goals of players. It has demonstrated how goals contribute to controversy, and how both public and private interests are involved. It should be clear that while goals are a pervasive influence in the development of public policy issues, they are open to subjective interpretation and are not easy to measure clearly. Moreover, even when players agree on goals, they may differ with one another on goal interpretation, the measurement of social conditions with respect to the goals, or how best to achieve the goals.

TABLE 2.2: REVIEW

CONCEPT	DEFINITION	SKILLS	EXAMPLE
Goal	Preferred social condition motivating players.	Identify goals	Less loss of life through traffic accidents.
Private Interest	Goal pursued for direct benefit to the player.	List private interests of players.	Landowner receiving a building permit.
Tangible Public Interest	Goal assumed to benefit the whole society in a measurable way.	List a tangible public interest.	Building a new highway.
Intangible Public Interest	Goal assumed to benefit the whole society but cannot be measured.	List public interest of a player that is intangible.	Justice in providing welfare benefits.
Goal Conflicts	Disagreement over which goal is applicable, interpretation of same goal or how to achieve the same goal.	Identify goal conflicts in public policy issues.	Conflict between bar owners who want to sell to 19 and 20 year-olds and officials who want to reduce highway fatalities.

CHAPTER 3

DIFFERENT TYPES OF PUBLIC POLICY ANALYSIS

Analyzing public policy issues is more than just collecting and organizing information. It is working with that information to better understand the causes and possible resolution of those issues. This chapter introduces you to the five types of public policy analysis that taken together constitutes "working with that information."

OBJECTIVE

On completion of this chapter, you should be able to identify the five types of public policy analysis and apply criteria for each of those types of analysis to discussion of public policy issues.

INTRODUCTION

The term "analysis" is used in ordinary conversation to mean studying a subject and coming to some conclusions about it. The dictionary definition is "separation of a whole, whether a material substance or any matter of thought, into its constituent elements" (American College Dictionary. Note the big gap between the everyday use of the term and its technical definition.

For the purpose of this book, we will not try to come up with a formal, abstract, definition of analysis. Rather, we will identify five different tasks that public policy analysts perform when they analyze public policy issues. We will help you identify which type is being presented—not an easy task when the analyst is trying to win you over to his or her side. In addition, we will give you a list of criteria for each of the tasks so that you can decide when the analyst is performing each type as well as possible. In applying the criteria, you should also begin to learn how to perform these tasks yourself.

STEP 3.1: Identify the Five Types of Analysis.

When we say that we are "analyzing" a public policy issue, we are doing one or more of the following:

1. Monitoring social conditions — that is reporting systematically conditions that have occurred. For example, the analyst can monitor traffic safety in New York State by reporting the number of traffic fatalities for each of the past five years.

2. Explaining social conditions — that is, specifying the most important factors contributing to social conditions. For example, one factor contributing to increased traffic fatalities is the increase in the number of subcompact cars.

3. Forecasting social conditions — that is, predicting what social conditions will develop in the future. For example, the analyst can forecast the number of traffic fatalities likely to occur for each of the next five years.

4. Evaluating social conditions — that is, using the goals of players or the analyst to determine whether social conditions are desirable or undesirable. For example, the analyst might conclude that the number of traffic fatalities is too high or conversely, if the trend is downward, that conditions are improving.

5. Prescribing a public policy — that is, describing what public policy ought to be pursued given the social conditions that now exist and are likely to exist. For example, the analyst might prescribe a mandatory seat belt law, as the New York State government did in 1984, to reduce traffic fatalities.

The next exercise gives you practice in identifying these types of public policy analysis. Read the article on the next page before looking at the example.

You Still Can't See Forest for the Billboards

By John Miller

LOS ALTOS, Calif. — This year marks the 20th anniversary of the Highway Beautification Act, but the law that was thought to have relegated outdoor advertising to the dustbin of cultural grotesqueries has failed.

As many as 300,000 billboards blight our nation's highways, an average of 14 billboards for every 10 miles of federally supported pavement. Though estimates vary, possibly 320,000 new billboards have been legally erected since 1965 under loopholes in the act.

In Tennessee, Louisiana and other states, billboard companies have appropriated the legal right to clear cut trees on the public right-of-way that happen to be blocking motorists' views of billboards on private land. Billboards as large as 2,500 square feet have become an integral part of the physical and psychological landscape.

Where did the Highway Beautification Act go wrong?

For one thing, it exempted all urban areas from billboard controls and regulated only billboards in rural areas. Yet the definition of "rural" was left to local authorities vulnerable to domination by the billboard lobby. Meanwhile, the act earmarked for removal billboards located on highways that had never really been regarded by the billboard companies as ideal advertising locations. And, finally, the act awarded compensation to companies whose billboards were removed — a costly deterrent to effective action.

In short, the act created the illusion that the Federal Government was doing something while in fact it was giving the billboard companies custody of America the Beautiful.

And here's what they plan to do with it. The Outdoor Advertising Association of America is now seeking passage of the "Freedom of Outdoor Communications Act," which would negate existing Federal billboard controls, permit up to two billboards per mile on interstate highways and require that trees in the public rights-of-way that block billboards be cut down at state expense. Not satisfied with billboards' infestation of rural highways and commercial and industrial areas, the billboard lobby wants now to commercialize virtually all public space, including residential neighborhoods.

But not all is lost. The Supreme Court has ruled that commercial billboards may constitutionally be regulated and prohibited, and Hawaii, Vermont, Maine and many local communities have banned them. At the same time, moratoriums on new billboards in Houston, Dallas, For Worth, Tex., and Little Rock, Ark. may persuade Congress to enact a national moratorium on all new billboard constructon.

Additional reforms might include stronger enforcement of existing laws, allowing states and localities to amortize billboards rather than pay full and immediate compensation for their removal, and establishing a highway tax on billboard companies, which remain the only highway users that pay no use fees.

There has clearly been courage on the local level. This should be emulated by Congress. □

John Miller is a public-relations consultant whose clients include the Coalition for Scenic Beauty.

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EXAMPLE FOR EXERCISE 3.1
Identify the Five Types of Analysis

(A) SELECT AN EDITORIAL OR SIMILAR OPINION PIECE THAT DISCUSSES A PUBLIC POLICY ISSUE. (B) IDENTIFY ONE OF EACH OF THE FIVE TYPES OF ANALYSIS EXPRESSED IN THE EDITORIAL EITHER BY QUOTING DIRECTLY FROM THE EDITORIAL OR PARAPHRASING WHAT WAS SAID OR IMPLIED.

A. SOURCE: John Miller, "You Still Can't See the Forest for the Billboards," New York Times, January 28, 1985, p. A15.

B. EXAMPLES OF FIVE TYPES OF ANALYSIS:

1.	MONITORING SOCIAL CONDITIONS:	The author says that though estimates vary, possibly 320,000 new billboards have been legally erected since 1965, with a total of 500,000, or 14 per 10 miles of Highway.
2.	EXPLAINING SOCIAL CONDITIONS:	A strong billboard lobby has weakened the enforcement of the federal law.
3.	FORECASTING SOCIAL CONDITIONS:	The author states that if the Outdoor Advertising Association of America is allowed to have its way it will commercialize virtually all public space along highways.
4.	EVALUATING SOCIAL CONDITIONS:	The author says that the highways are more cluttered by signs now than before the act went into effect.
5.	PRESCRIBING A PUBLIC POLICY:	The author suggests that existing anti-billboard laws should be enforced more strictly.

EXERCISE 3.1
Identify the Five Types of Analysis

(A) SELECT OWN EDITORIAL OR SIMILAR OPINION PIECE THAT DISCUSSES A PUBLIC POLICY ISSUE. (B) IDENTIFY ONE OF EACH OF THE FIVE TYPES OF ANALYSIS EXPRESSED IN THE EDITORIAL EITHER BY QUOTING DIRECTLY FROM THE EDITORIAL OR PARAPHRASING WHAT WAS SAID OR IMPLIED.

A. SOURCE:

B. EXAMPLES OF FIVE TYPES OF ANALYSIS:

1. MONITORING SOCIAL CONDITIONS:

2. EXPLAINING SOCIAL CONDITIONS:

3. FORECASTING SOCIAL CONDITIONS:

4. EVALUATING SOCIAL CONDITIONS:

5. PRESCRIBING A PUBLIC POLICY:

STEP 3.2: Assess the Monitoring of Social Conditions

No intelligent discussion of any public policy issue can occur unless you are aware of the social conditions that have generated the issue in the first place. You should understand what constitutes the adequate monitoring of social conditions. This section lists a set of criteria so that when you read a public policy analysis or listen to a public policy discussion, you can judge the quality of the monitoring behind the analysis. Ask three essential questions determine the quality of monitoring.

1. How clear and precise is the information presented? The monitoring should give as much information about what, where, and when. A statement like "traffic fatalities in New York State are very high" is poor. A better statement would be "traffic fatalities in New York State for the years 1980-1984 were 7% above the national average." Look for a clear statement of social conditions by number and specified by time and place.

2. To what degree is the information complete? Testing for completeness can be done in three ways. First, does the information provided allow for a comparison of conditions over time? It is better to know the number of traffic fatalities for each of the past five years than for only the most recent year. Second, does the information make an effort to cover all segments of the society or does it deal with only certain regions or groups. In a study of New York State, reports on traffic fatalities in just New York City could be inadequate. Third, does the information provide a basis for comparison with some other unit? Data on the number of traffic deaths per 100,000 for New York State would be more useful if it were provided for other states also or compared to the national average.

3. What type of evidence is provided that the information itself is accurate? You need to know the source of information. How did the analyst get the information? Are books cited or if collected from a survey of people or a survey of records, how was the sample chosen? Numbers and information provided without documentation cannot be trusted as much as those with documentation. Accuracy is always a problem in measuring social conditions, and the more you know about how that information was collected the better.

EXAMPLE FOR EXERCISE 3.2
Assess the Monitoring of Social Conditions

USING THE ENTIRE ARTICLE YOU USED IN EXERCISE 3.1, CRITIQUE THE MONITORING OF SOCIAL CONDITIONS. INDICATE BOTH THE STRENGTHS AND WEAKNESSES OF THE ARTICLE BY ANSWERING THE QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1 WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE EDITORIAL OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

The monitoring of social conditions in John Miller's article "You Still Can't See the Forest for the Billboards," New York Time, January 28, 1985, P. A15 can be critiqued as follows: (1) The information is relatively clear and precise concerning the number of billboards on the nation's highway. However, it does not indicate how many of the existing and new billboards are in areas that the law sought to prohibit. (2) Concerning the completeness of the information, the author does not even try to demonstrate that a representative sampling has been done or to indicate where in fact the signs are now distributed. Some comparisons over time are made, but comparing 1965 to 1985 without indicating whether or not the trend is up or down between different points of time within the period is a weakness. The author does not attempt to compare the findings to other countries. (3) No citation of the sources of the information is provided. It is not clear where the author obtained the information.

EXERCISE 3.2
Assess the Monitoring of Social Conditions

USING THE ENTIRE ARTICLE YOU USED IN EXERCISE 3.1, CRITIQUE THE MONITORING OF SOCIAL CONDITIONS. INDICATE BOTH THE STRENGTHS AND WEAKNESSES OF THE ARTICLE BY ANSWERING THE QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1 WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE EDITORIAL OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

STEP 3.3: Assess the Explanations of Social Conditions

After the social conditions contributing to a public policy issue are monitored, the next step is to try to explain why those conditions exist. Explaining why a condition exists is quite difficult because most social conditions are caused by a large number of factors. For instance, the number of traffic fatalities in California can be affected by the weather, the types of cars on the road, alcohol consumption, the average driving speed, and even the health of the economy. Systematic studies can give a general indication of which factors are important, but even the most elaborate studies fail to give absolutely complete explanations.

In examining a specific analysis of public policy, it is important to assess the quality of the explanations provided for existing social conditions. Several key questions can be asked that will help you make the assessment.

1. Does the analyst cite academic or government authorities as the sources for their explanation of the social condition? The more studies cited by a wide variety of research organizations the better. If various researchers come to the same conclusions about the reasons for a particular social condition, this is better yet.

2. How many factors does the analyst identify? Since most social conditions are caused by a large number of interacting factors, single-factor explanations are highly suspect. An attempt to consider a large number of factors on a systematic basis is a sign that the analyst is trying to be as careful as possible in developing explanations. The following categories of factors should be considered: (1) Economic, (2) Geographic, (3) Sociological, (4) Political, and (5) Psychological. It is also a good sign if the analyst recognizes the possibility of competing explanations for a social condition.

3. To what extent does the analyst offer evidence of the relationship of the factors to the social condition? Citing studies of others is important. It is also a good sign if the analyst offers historical data that supports a proposed explanation.

EXAMPLE FOR EXERCISE 3.3
Assess the Explanations of Social Conditions

USING THE ENTIRE ARTICLE YOU USED IN EXERCISE 3.1, CRITIQUE THE EXPLANATION OF SOCIAL CONDITIONS. INDICATE BOTH THE STRENGTHS AND WEAKNESSES OF THE ARTICLE BY ANSWERING THE QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1 WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE ARTICLE OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

The author does a poor job in explaining the factors behind the large number of billboard signs on American's highway. (1) No published sources are cited examining the reasons for the increase in the number of billboards. (2) The major factor that it emphasizes is the failure of government policy to enforce standards and the greed of billboard industry. It does not examine the economics of billboard advertising or the variation caused by geographical location. (3) Although it may be just a matter of government restriction versus the insensitivity of billboard companies, no systematic evidence was presented that other factors do not make a difference.

EXERCISE 3.3
Assess the Explanations of Social Conditions

USING THE ENTIRE ARTICLE USED IN EXERCISE 3.1, CRITIQUE THE EXPLANATION OF SOCIAL CONDITIONS. INDICATE BOTH THE STRENGTHS AND WEAKNESSES OF THE ARTICLE BY ANSWERING THE QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1 WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE ARTICLE OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

STEP 3.4: Assess the Forecasts of Social Conditions

Discussions of public policy issues are concerned with the future. All public policies are undertaken either to change future social conditions or to prevent changes. Forecasting, therefore, is critical to any public issue analysis.

Forecasting methods run the gamut from simply projecting past conditions into the future to the use of elaborate computer models. But no matter what methods an analyst uses, essential questions should be asked to evaluate the quality of a forecast.

1. Is the forecast clear with respect to what is being forecast and with respect to the time frame of the forecast? A statement that "traffic fatalities will continue to rise in New York State" is not as good a statement as "between 1986 and 1990, traffic fatalities in New York State are expected to increase 5% each year." It is easier to be vague about the forecast than to be precise. The reason is that if the statement is vague, it makes it difficult to judge whether or not the forecast is correct. The statement above will be right whether or not the rise is 1% of 100%, or whether or not the rise occurs just in the next year or sometime in the next 50 years. However, when the forecast says 5% a year for the next four years, it can be judged correct or incorrect at the end of the four year period.

2. Is authority cited? A forecast about a rise in traffic fatalities would be a better support for a policy if the analyst cites a forecast by well-recognized experts. The best sources are those which have an established record and have no vested interest in the conclusions of the forecast. If more than one authority is cited, this is even stronger support.

3. Are Assumptions about experience clearly stated? Are the bases for the forecast made clear? All forecasting is based on experience. The analyst must do one of two things: (1) Make the assumption that things will continue much as they have; or (2) provide reasons why things will be fundamentally different than they have been in the past. The forecast about the 5% rise in traffic fatalities would be better supported if it were based on a consistent 5% in each of the last five years, and the analyst believed that a similar rise would continue into the future. This forecast is an example of assuming past trends will continue. Because traffic fatalities have risen 5% per year in the past, the author assumes that it will continue to do so in the future. However, with the implementation of the mandatory seat belt law in some states, better assumption might be that the trend will be fundamentally changed and that the increase will not be the same as it has been.

EXAMPLE FOR EXERCISE 3.4

Assess the Forecasts of Social Conditions

USING THE ENTIRE ARTICLE USED IN EXERCISE 3.1, CRITIQUE THE FORECASTING OF SOCIAL CONDITIONS. INDICATE BOTH THE STRENGTHS AND WEAKNESSES OF THE ARTICLE BY ANSWERING THE QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1 WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE ARTICLE OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

(1) The article cited in Exercise 3.1 lacks any clear forecast. The author implies that unless something is done, our highways will be more cluttered with billboards, but no attempt is made by the analyst to forecast how many more will be built. (2) The analyst does not attempt to justify even the implied forecast--that the number of billboards will continue to increase. Instead, the analyst relies on an implicit assumption that because the number has increased between 1965 and 1985, it will continue to increase. However, because the monitoring detailing the increase is not precise, the basis for projecting a trend is unclear.

EXERCISE 3.4

Assess the Forecasts of Social Conditions

USING THE ARTICLE USED IN EXERCISE 3.1, CRITIQUE THE FORECASTING OF SOCIAL CONDITIONS. INDICATE BOTH THE STRENGTHS AND WEAKNESSES OF THE ARTICLE BY ANSWERING THE QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1 WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE ARTICLE OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

STEP 3.5: Evaluate Social Conditions

Any analysis of a public policy issue requires the analyst to assess social conditions according to a set of goals. A good analysis will start with an explicit recognition of the analyst's own goals, but it will also take into consideration other goals that players may have whether the analyst shares them or not. Several questions should be asked to assess the way these goals are used in public policy analysis.

1. Are the major goals clearly identified? In almost all analyses of public policy issues, a number of overriding goals appear to be motivating the analyst. For example, the most important goal that underlies most discussions of the mandatory seat belt law in New York State is the public interest in preserving human life and avoiding serious injury. In many cases, analysts take for granted that the reader understands the importance of the goal in the analysis. However, good public policy analysis should make the importance of this goal explicit.

2. Are other goals motivating either the analyst or the player and are they explicitly stated? A good public policy analysis identifies the key policy goals—both private interests and public interests — regardless of the analyst's opinion. A discussion of the mandatory seat belt law can begin with the public interest on human life, but should identify other goals which may or may not be in conflict with saving lives, such as (1) individual freedom, which many feel is reduced by the law, (2) the legitimacy of the government itself because of the difficulty in enforcing the law, (3) increased costs to taxpayers resulting from the enforcement costs, and (4) reduced car insurance premiums.

3. Is the analyst clear about a preferred hierarchy among the goals? Assuming that the analyst has identified a set of goals rather than only one, it is also necessary to be clear about the hierarchy among the goals. A rigid formula need not be presented. Instead, the analyst might suggest that one goal is the most important, but that three or four others ought to be considered and given relatively equal weight. In the example of the mandatory seat belt issue, the analyst might say that the goal of saving lives is by far the most important but that the goal of individual freedom is the second most important, and that other goals such as keeping the cost of government down are a minor consideration.

4. Does the analyst provide guidelines for measuring whether or not social conditions improve or get worse according to the goals? To help the reader understand the implication of the goals of the analyst and players, the analyst should stipulate how the goals can be measured with respect to relative social conditions. In some cases goals are easy to measure, but in others they are more difficult. It is easy to measure most private interest goals and relatively easy to measure tangible

public interests, but it is difficult to measure intangible public interests such as freedom or justice. However, to the extent possible, the analyst should be clear about how to tell if goals are being met.

For example, it is easy to measure the number of traffic fatalities, but difficult to measure individual freedom. However, the analyst should at least specify guidelines for judging which social conditions are desirable, and which are undesirable. If we see traffic fatalities and injuries reduced after the implementation of the seat belt law, we are able to determine whether the law was a good or bad thing.

In some cases, it is also valuable to know how much change must occur in order to decide whether social conditions have improved or not. Some might say that if the mandatory seat belt law saves just a single life, that alone is sufficient justification for it. Others might set a percentage reduction in fatalities and injuries to decide whether the policy is successful or not. The key is to be as specific as possible about the level of changes in social conditions.

EXAMPLE FOR EXERCISE 3.5
Evaluate Social Conditions

USING THE SAME ARTICLE AS IN PREVIOUS SECTIONS, PROVIDE A CRITIQUE OF THE USE OF GOALS IN THE ARTICLE. BE SURE TO WRITE AT LEAST ONE SENTENCE ON EACH OF THE FOUR QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1 WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE EDITORIAL OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

(1) The author of the article cited in Exercise 3.1 seems to be concerned only with the question of the beauty of the countryside. (2) The author does not ask other goal questions dealing with traffic safety, business development, freedom of speech, and lost or gained government revenues. (3) Because of the failure to identify other goals, no attempt can be made to indicate a hierarchy among the goals discussed. (4) No attempt is made to measure lack of beauty except to assume that each individual billboard built reduces the amount of beauty.

EXERCISE 3.5
Evaluate Social Conditions

USING THE SAME ARTICLE AS IN PREVIOUS SECTIONS, PROVIDE A CRITIQUE OF THE USE OF GOALS IN THE ARTICLE. BE SURE TO WRITE AT LEAST ONE SENTENCE ON EACH OF THE FOUR QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1 WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE EDITORIAL OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

STEP 3.6: Assess Public Policy Prescriptions

Prescriptions are the proposals as to which public policies should deal with social conditions that at least some important segment of the society wants improved. It requires that existing conditions be monitored, the explanation be offered, that future conditions are predicted, and that goals be applied to the conditions. Because it incorporates the four other forms of analysis, prescription is the most complicated of the four types of analysis. Several questions should be asked in assessing the quality of prescriptive analysis.

1. What is the quality of the monitoring, explanation, forecasting, and goal evaluation that preceded the suggested policies? If the analysts have employed systematic monitoring, have provided clear explanation for the conditions being monitored, and have been clear about the basis upon which they have made their forecasts and evaluations, the analysis can help decide what goals the policy prescription should seek.

2. Does the analyst provide a clear prescription? What policy is recommended? Even if the analysis favors the continuation of the current policy, this must be clearly stated.

3. Does the analyst provide a discussion of alternatives of the favored prescription? While the analysis may strongly endorse a specific policy, it should examine alternatives in order to demonstrate that the analysis systematically includes all the relevant factors. For example, if an analysis favors mandatory seat belt legislation, it should discuss such alternatives as (1) no changes in the law, (2) an alternative safety mechanism such as mandatory air bags in all cars, or (3) more money spent on education to convince people to use seat belts.

4. Has the analyst systematically explored the intended and unintended consequences of the prescriptions and the possible alternatives? For each alternative suggested, the analyst should consider the consequences that may result directly or indirectly from the policy.

5. Does the analyst weigh the costs and benefits of each alternative as a basis for indicating the preferred alternative? Sometimes costs and benefits can be clearly specified--lives and dollars, for example--but in many cases it is difficult to measure costs and benefits since different people value the same social conditions differently. The costs and benefits are in many cases no more than the substantive estimates of the analyst. However, at least some attempt at providing such subjective estimates is required along with a conclusion that the benefits outweigh the costs for the preferred prescription. A more complete discussion of costs and benefits appears in Chapter 9 of this manual.

EXAMPLE FOR EXERCISE 3.6
Assess Public Policy Prescriptions

USING THE SAME ARTICLE AS IN PREVIOUS SECTIONS, PROVIDE A CRITIQUE OF THE PRESCRIPTIONS IN THE ARTICLE. BE SURE TO WRITE AT LEAST ONE SENTENCE ON EACH OF THE QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1 WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE EDITORIAL OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

The prescription in the editorial cited in Exercise 3.1 is deficient for several reasons. (1) The monitoring, explanation, forecasting, and goal analysis do not provide a firm basis from which to make alternative policy prescriptions. (2) The writer does make his own goal clear—prohibit more billboards. But, he does not specify exactly what he thinks should be done to achieve this. (3) The writer does present several alternative prescriptions all of which might be followed simultaneously. (4) However, the writer does not discuss the consequences—both intended and unintended—of each of these alternatives. For example, what would be the consequences of a highway tax on billboard companies? (5) The author fails to weigh the relative benefits and costs of each of the alternatives and to conclude which would be preferred.

EXERCISE 3.6
Assess Public Policy Prescriptions

USING THE SAME EDITORIAL AS IN PREVIOUS SECTIONS, PROVIDE A CRITIQUE OF THE PRESCRIPTIONS IN THE ARTICLE. BE SURE TO WRITE AT LEAST ONE SENTENCE ON EACH OF THE QUESTIONS POSED IN THE PRECEDING PAGES. NUMBER THE SENTENCES THAT REFER TO EACH QUESTION. DO NOT BE RESTRICTED TO THE ITEMS YOU IDENTIFIED IN 3.1, WHEN PRESENTING YOUR CRITIQUE. EITHER GIVE SPECIFIC ILLUSTRATIONS FROM THE EDITORIAL OR SUGGEST HOW THE WRITER MIGHT HAVE SATISFIED THE CRITERIA PROVIDED.

SUMMARY

This chapter has just surveyed the five types of public policy analysis and criteria for assessing the quality of each type. Because most discussions of public policy do not follow the guidelines contained in this chapter, the identification of each type is frequently difficult. Even more difficult is finding examples of good public policy analysis according to the criteria we have provided. When looking at the definitions and criteria we have just provided, the reasons for the lack of quality in most discussions of public policy issues should be obvious. Those who write about and speak on public policy issues are not motivated to meet the standards which most professional public policy analysts would agree are acceptable. Writers or speakers on public policy issues are usually either players trying to win the uncommitted to their side or journalists whose chief goal is to win readers. Some players and journalists seek to balance their chief goal with the goals of a good public policy analyst. But until citizens know what good public policy analysis is and demand it from those who participate in and write about the political process, they cannot expect much more from those whose livelihood depends upon it.

By now you should know the five types of analysis quite well and be able to make judgments about the discussion of public policy you read and hear.

TABLE 3.1: REVIEW

TYPE OF ANALYSIS	DEFINITION	CRITICAL FACTORS	SKILLS	EXAMPLES
Monitoring	Describing conditions	● Clarity ● Precision ● Completeness ● Quality of evidence	Identify and critique	Inflation in the United States was 4% in 1984
Explaining Social Conditions	Providing reasons for past conditions	● Reference to authority ● Multiple factors ● Evidence supporting relationship of factors	Identify and critique	More unemployment leads to more crime
Forecasting Social Conditions	Projecting conditions into the future	● Stated time-frame ● Reference to authority ● Explicit basis	Identify and critique	Crime is expected to increase in the late 1980s
Evaluating Social Conditions	Applying goals to determine whether social conditions are good or bad	● Clearly identified major goals ● Acknowledgement of other goals ● Stated hierarchy among goals ● Guidelines for measuring effect of goals	Identify and critique	There are too many automobile fatalities in the United States
Prescribing Public Policies	Suggesting public policies to create preferred social conditions	● Foundation for proposed policies ● Clarity of prescription ● Reference to alternatives ● Awareness of potential impact ● Weigh costs/ benefits of alternatives	Identify and critique	Raise the drinking age to 21

PART II: INFORMATION-GATHERING SKILLS

This section of the manual introduces two major sources of information on public policy issues--the library and people. Basic library research skills are essential to gain information on the public policies, social conditions, and players relevant to any public policy issue. In general, the library contains information that describes past conditions--although it may be the immediate past. People who are affected by public policies, players in the making of public policy, or those concerned with the implementation of public policies are also a very important source of information, especially if current information is needed. Tools to get information from people in the form of surveys and interviews are discussed in the second chapter in this section.

Chapter 4: Using the Library as a Source of Background Data

- Step 4.1: Choose a Topic
- Step 4.2: Use Dictionaries and Encyclopedias
- Step 4.3: Use Indexes and Abstracts
- Step 4.4: Use Almanacs, Yearbooks, and Statistical Sources To Obtain Quantitative Data
- Step 4.5: Obtain Information on Events--Newspapers and Survey of Events
- Step 4.6: Use United States Government Publications
- Step 4.7: Use United States Census Data
- Step 4.8: Use Microforms
- Step 4.9: Locate Books
- Step 4.10: Relate Information to Components of Public Policy Issues

Chapter 5: Using Surveys

- Step 5.1: Decide on the Purpose of a Survey
- Step 5.2: Choose a Sample
- Step 5.3: Decide on a Method of Contact
- Step 5.4: Decide on the Questions
- Step 5.5: Estimate the Costs of a Survey or Interview

CHAPTER 4

USING THE LIBRARY AS A SOURCE OF BACKGROUND DATA*

Libraries contain a vast amount of information that can help you analyze public policy issues. To use the library effectively, you need to become familiar with how libraries are organized, and how to use the various kinds of tools that exist to help you locate information. The purpose of this chapter is to provide you with general knowledge about locating information in libraries.

OBJECTIVE

On completion of this chapter, you should be able to locate information pertinent to public policy issues in dictionaries, encyclopedias, journals, magazines, newspapers, microfilm, statistical sources, government publications, and books.

INTRODUCTION

The effective use of the library requires you to complete two very different types of tasks. The first is the ability to know what kind of information you want. The second is, once you have a good idea of what information you want, to locate that information as quickly as possible. Unfortunately, the first task is much more difficult to accomplish than the second. It requires you to have some knowledge about your topic and to form questions that need to be answered once you know how to analyze your topic.

This chapter and its exercises constitute practice material through which you can begin to develop rudimentary skills in the location of information in the library. You will further develop these skills when completing the tasks required for the remainder of the course. So, the more seriously you complete the exercises in this chapter, the more efficiently you will be able to locate information for Chapters 6-10.

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*Roberta Palen of Bird Library, Syracuse University has worked closely with the authors in field-testing and revising this chapter. She has provided up-to-date citations, drafts of specific sections and suggestions for exercises.

STEP 4.1: Choose a Topic

Selecting a public policy issue on which to develop library research skills should be done with careful consideration. Ask yourself the following questions:

- Do you have some knowledge and interest in the topic?
- Can you think of terms that need to be understood through a dictionary or encyclopedia?
- Can you think of any quantitative data related to your topic?
- Has there been anything in the news concerning your topic?

Can you answer 'YES' to all these questions? If not, pick another topic.

EXAMPLE FOR EXERCISE 4.1
Choose A Topic

PROVIDE THE REQUESTED INFORMATION FOR THE FOLLOWING:

TOPIC:	World Hunger
WHY YOU ARE INTERESTED:	I am upset over all the reports of starving people.
ONE TERM RELATED TO THE TOPIC (OTHER THAN THE TERM USED IN YOUR DESCRIPTION OF THE TOPIC):	Famine
ONE RELEVANT QUANTITATIVE INDICATOR:	Annual rainfall in Africa
ONE ACTUAL OR HYPOTHETICAL NEWSWORTHY EVENT:	The 1985 "Live Aid" concert to raise funds for famine relief
ONE ACTUAL OR POSSIBLE POLICY RELATED TO THE TOPIC:	Overseas United States food aid programs
ONE SOCIAL CONDITION RELATED TO THE TOPIC:	Poor transportation in developing countries
ONE PLAYER RELATED TO THE TOPIC	United States Secretary of State

EXERCISE 4.1
Choose A Topic

PROVIDE THE REQUESTED INFORMATION FOR THE FOLLOWING:

TOPIC:

WHY YOU ARE INTERESTED:

ONE TERM RELATED TO THE TOPIC (OTHER THAN THE TERM USED IN YOUR DESCRIPTION OF THE TOPIC):

ONE RELEVANT QUANTITATIVE INDICATOR:

ONE ACTUAL OR HYPOTHETICAL NEWSWORTHY EVENT:

ONE ACTUAL OR POSSIBLE POLICY RELATED TO THE TOPIC:

ONE SOCIAL CONDITION RELATED TO THE TOPIC:

ONE PLAYER RELATED TO THE TOPIC:

STEP 4.2: Use Dictionaries and Encyclopedias

The first step in research is to define clearly what you are studying. Definitions can be found in dictionaries and encyclopedias. The basic difference between a dictionary and an encyclopedia is that the former provides the range of meanings people usually attach to critical terms relevant to your public policy issue. The latter gives historical background information on major events and conditions that shape the issue.

Occasionally, one might run across specialized terms, or "jargon." A dictionary or encyclopedia will supply a definition that could clarify these specialized terms. A list of dictionaries and encyclopedias that you might use appears below:

DICTIONARIES

Dictionaries primarily give short definitions, proper spelling, pronunciation, and syllabification. Some dictionaries also provide information on the origin of the word. The following are some good, all-purpose dictionaries:

American Heritage Dictionary of the English Language, New York: American Heritage Publishing Company, 1973.

The Oxford English Dictionary, Oxford: Clarendon Press, 1933 (with supplements).

Webster's New International Dictionary of the English Language, Springfield: G. & C. Merriam Company, 1981.

The Random House Dictionary of the English Language, New York: Random House, 1971.

Plano, Jack, and Greenberg, Milton, The American Political Dictionary, 5th ed. New York: Holt, Rinehart and Winston, 1979.

Plano, Jack, and Olton, Roy, International Relations Dictionary, 3d ed. Santa Barbara, California, 1982.

Raymond, Walter J., Dictionary of Politics: Selected American and Foreign Political and Legal Terms, Lawrenceville, Virginia: Brunswich Publishing Co., 1980.

Reading, Hugo, Dictionary of the Social Sciences, Boston: Routledge and Kegan Paul, 1977.

ENCYCLOPEDIAS

Encyclopedias define both terms and concepts, and give much broader definitions than dictionaries. Like the dictionaries, encyclopedias can be either general or specialized. Three good general encyclopedias are:

Encyclopedia Americana, Danbury, Connecticut: Grolier Educational Corp. 1983. This 30 volume work is particularly good for information on towns and cities.

Encyclopaedia Britannica, Chicago: Encyclopaedia Britannica, 1983. Another 30 volume work, recently revised in an attempt to make it easier to use. This is the most famous encyclopedia in English--and for some purposes the best.

International Encyclopedia of the Social Sciences, New York: Macmillan, 1977. This 8 volume set was intended to complement its predecessor, Encyclopedia of the Social Sciences. Its primary focus is on the rapid developments of the 1960s, with emphasis on the analytical and comparative aspects of a topic.

EXAMPLE FOR EXERCISE 4.2
Use Dictionaries and Encyclopedias

FIND AND DEFINE TWO TERMS THAT ARE RELEVANT TO YOUR TOPIC AND COMPLETE THE FOLLOWING OUTLINE. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE):

TERM 1:	Defense
DEFINITION:	1) The act of defending 2) Capability of resisting attack 3) Means or method of defending: defensive plan, policy or structure
CITATION OF GENERAL DICTIONARY USED:	Websters Third World New International Dictionary, G & C Merriam Company, c. 1976 pg. 591, col. 2.
TERM 2:	Military Government
DEFINITION:	The administration of occupied territory by an occupying power, including the exercise of executive, legislative, and judicial authority.
CITATION OF GENERAL ENCYCLOPEDIA USED:	Encyclopaedia Britannica, Encyclopaedia Britannica Inc., c. 1973, vol. 15, pg. 449

EXERCISE 4.2
Use Dictionaries and Encyclopedias

FIND AND DEFINE TWO TERMS THAT ARE RELEVANT TO YOUR TOPIC AND COMPLETE THE FOLLOWING OUTLINE. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE):

TERM 1:

DEFINITION:

CITATION OF GENERAL
DICTIONARY USED:

TERM 2:

DEFINITION:

CITATION OF GENERAL
ENCYCLOPEDIA USED:

STEP 4.3: Use Indexes and Abstracts

Now that you have clarified your topic, you are ready to begin researching it. For current public policy issues, valuable sources of information are found in magazines and journal articles--referred to as "periodical literature" because new issues are published on a specific time schedule.

Magazine and journal articles can be used to provide both background information and more information on the current status of your public policy issue. Magazines and journals differ in several respects. Magazines have a broader readership, carry extensive advertising, and do not usually have formal bibliographic citations. Magazine articles tend to cover the activities of players on a public policy issue or the likelihood and the possible impact of new public policies. Journals are designed for scholars, analysts, and players in the policy-making process. Journal articles tend to cover social conditions prompting public policies or to provide thorough evaluations of the impact of public policies. Journal articles usually have formal bibliographic citations. They are published less frequently than magazines and articles must undergo a review process that involves evaluations by specialists in the field. Journal articles usually have less current information than magazine articles.

Because a huge number of articles are published every year you need some way to systematically search for those articles that are appropriate to your topic. This need is met by abstracting and indexing services. These sources list articles, most often by subject, and provide the article title, author, journal, date, issue, volume, and page number.

There are four kinds of indexes:

- General Indexes: These cover a large number of periodicals on a variety of subjects.
- Subject Indexes: These cover a large number of periodicals on one general topic such as business, public administration, etc.
- Single Title Indexes: These cover only one publication or title.
- Abstracts: These provide, in addition to the index information, brief summaries of the articles.

The information in indexes is arranged alphabetically by subject, and occasionally by author as well, and sometimes by title. Since it is likely that you will be conducting a search by subject, you will be faced with the problem of what subject heading to look for. Thinking of subject headings can be accomplished in two steps: (1) Think of several different terms to describe important aspects of your topic. For instance, if you were looking for articles on world hunger, you might come up with such terms as "hunger," "food supplies," "famine," and drought." (2) Think of related words for these terms. For example, the term "drought" could also lead you to related terms like "desertification," "rainfall," "climate," and "weather." Once you have thought of several terms (6-10 is a good number to start with), look through the subject headings in the indexing or abstracting service to see if any of those words appear. If they do not, you will have to think of other terms used by the service that are relevant to your topic.

Indexes can be found to cover almost any area of interest. For public policy analysis, however, certain indexes and abstracts are most useful. Many of them are listed below. Note that the Readers' Guide to Periodical Literature is identified as a general index because it covers all areas, not just the social sciences. The others are focused more directly on the social sciences and, therefore, are relevant to a wide range of public policy issues. Also, the Readers' Guide indexes magazine articles while the subject indexes and abstracts cover primarily journal articles.

GENERAL INDEXES

Readers' Guide to Periodical Literature, New York: H. W. Wilson Co., 1900-. This index provides a well-balanced guide to nontechnical journals. About 169 periodicals are cataloged.

SUBJECT INDEXES

ABC Pol Sci: A Bibliography of Contents: Political Science and Government, Santa Barbara, CA: ABC-Clio, 1969-. A service listing the contents of the latest journals in the fields of political science, government, public policy, etc.

Bulletin of the Public Affairs Information Service (PAIS), New York: PAIS, 1915-. This set is a subject index to current literature on economic and social conditions.

Business Periodicals Index, New York: H. W. Wilson Co., 1958-. A service that indexes 170 periodicals in various fields of business and management.

Education Index, New York: H. W. Wilson Co., 1929-. This is a subject index to about 240 periodicals in the field of education.

Index of Economic Articles in Journals and Collective Volumes, Homewood, IL: R. D. Irwin Co., 1961-. The index lists articles from about 140 sources from various countries.

Index to Current Urban Documents, Westport, CT: Greenwood Press, 1972-. Indexes county documents and documents of "the largest cities in all fifty states and territories and Canada."

Social Sciences Index, New York: H.W. Wilson Co., 1974-. An index to more than 200 periodicals in the various fields of the social sciences.

Social Sciences Citation Index, Philadelphia: Institute for Scientific Information, 1973-. An international interdisciplinary index to the literature of the Social Sciences.

ABSTRACTS

Criminal Justice Abstracts, Monsey, NY: Willow Tree Press, 1968-. Formerly Crime and Delinquency Literature. Contains abstracts of current books, journal articles and reports in the field of crime and criminal justice.

Dissertation Abstracts International, Ann Arbor, MI: University Microfilms, 1938-. Abstracts of doctoral dissertations in three volumes: Humanities and Social Sciences, Science and Engineering, and European Abstracts.

Human Resources Abstracts, Beverly Hills, CA: Sage Publications, 1975-. This covers material related to social and manpower problems. (Formerly Poverty and Human Resources Abstracts)

International Political Science Abstracts, Paris: International Political Science Association, 1951-. A source which covers articles published in many countries in the field of political science.

Journal of Economic Literature, Cambridge, MA: Harvard University, 1969-. This source contains lengthy abstracts from 35 journals. (Formerly Journal of Economic Abstracts.)

Psychological Abstracts, Lancaster, PA: American Psychological Association, 1927-. A bibliography, listing and abstracting scholarly articles in various journals of psychology.

Sociological Abstracts, New York: Sociological Abstracts, 1952-. A classified abstracting journal that covers a broad range of topics of international interest.

Women's Studies Abstracts, Rush, NY: Rush Publishing Co., 1972-. This source contains abstracts from a broad range of periodicals dealing with topics concerning women.

EXAMPLE FOR EXERCISE 4.3
Use Indexes and Abstracts

COMPLETE EACH OF THE TASKS BELOW.

A. USING THE READERS' GUIDE TO PERIODICAL LITERATURE, LIST TWO SUBJECT HEADINGS THAT COULD BE USED IN LOCATING ARTICLES RELEVANT TO YOUR TOPIC. FIND ONE RELEVANT ARTICLE, GIVE A FULL CITATION, AND WRITE AN ANNOTATION OR SUMMARY (AT LEAST 30 WORDS) OF THE ARTICLE. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE.)

INDEX OR ABSTRACT CITATION:	Readers' Guide to Periodical Literature, June 10, 1985, Vol. 85, No. 6.
SUBJECT HEADING #1:	Traffic Accidents
SUBJECT HEADING #2:	Policies
ARTICLE CITATION:	Readers' Guide, p. 34, Harry Anderson. "Mexico Busts Its Top Cops." Newsweek, April 22, 1985

SUMMARY: The article describe how bribes, death threats, and lies impede the Mexican police's efforts to stop the drug traffic. It also examines how the United States government pressures the Mexican government to take stronger action against the drug traffic.

B. SELECT ONE OF THE INDEXES OR ABSTRACTS OTHER THAN THE READERS' GUIDE LISTED IN THE PREVIOUS PAGES. GIVE A FULL CITATION OF THE INDEX OR ABSTRACT, AND LIST TWO SUBJECT HEADINGS THAT COULD BE USED IN LOCATING ARTICLES RELEVANT TO YOUR TOPIC. FIND ONE RELEVANT ARTICLE, GIVE A FULL CITATION, AN ANNOTATION, OR SUMMARY (AT LEAST 30 WORDS) OF THE ARTICLE.

INDEX OR ABSTRACT CITATION:	Bulletin of the Public Affairs Information Service (PAIS), New York: PAIS, Vol. 71, January - March 1985.
SUBJECT HEADING #1:	Hunger
SUBJECT HEADING #2:	Economic Assistance
ARTICLE CITATION:	"The New GSP" Fair Trade With the Third World? World Policy Journal, Spring 1985, Vol. 2, No. 2.
SUMMARY:	The article reviews the effects of the Generalized System of Preferences. The system was designed to increase imports from developing countries. The conclusion was that the GSP should be continued.

EXERCISE 4.3
Use Indexes and Abstracts

COMPLETE EACH OF THE TASKS BELOW.

A. USING THE READERS' GUIDE TO PERIODICAL LITERATURE, LIST TWO SUBJECT HEADINGS THAT COULD BE USED IN LOCATING ARTICLES RELEVANT TO YOUR TOPIC. FIND ONE RELEVANT ARTICLE, GIVE A FULL CITATION, AND WRITE AN ANNOTATION OR SUMMARY (AT LEAST 30 WORDS) OF THE ARTICLE. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE.)

INDEX OR ABSTRACT
CITATION:

SUBJECT HEADING #1:

SUBJECT HEADING #2:

ARTICLE CITATION:

SUMMARY:

B. SELECT ONE OF THE INDEXES OR ABSTRACTS OTHER THAN THE READERS' GUIDE LISTED IN THE PREVIOUS PAGES. GIVE A FULL CITATION OF THE INDEX OR ABSTRACT, AND LIST TWO SUBJECT HEADINGS THAT COULD BE USED IN LOCATING ARTICLES RELEVANT TO YOUR TOPIC. FIND ONE RELEVANT ARTICLE, GIVE A FULL CITATION, AN ANNOTATION, OR SUMMARY (AT LEAST 30 WORDS) OF THE ARTICLE.

INDEX OR ABSTRACT
CITATION:

SUBJECT HEADING #1:

SUBJECT HEADING #2:

ARTICLE CITATION:

SUMMARY:

STEP 4.4: Use Almanacs, Yearbooks, and Statistical Sources to Obtain Quantitative Data

Almanacs and yearbooks give both statistical and general descriptive information in an easy-to-acquire format. Here is a brief list of some of the more widely used sources.

ALMANACS

Information Please Almanac, New York: Simon and Schuster, 1947-.

Reader's Digest Almanac, Pleasantville, New York: Reader's Digest Association, 1969-.

The World Almanac and Book of Facts, New York: Newspaper Enterprise Association, 1868-.

YEARBOOKS

United Nations, *Statistical Yearbook*, New York: United Nations Publications, 1948-.

The County Yearbook, Washington, D.C.: International City Management Association, 1975-.

The Municipal Yearbook, Washington, D.C.: International City Management Association, 1934-.

The Statesman's Yearbook, New York: St. Martin's Press, 1864-.

STATISTICAL SOURCES

The Council of the State Government, *The Book of The States*, Lexington, Kentucky: The Council, 1935-.

United States Bureau of Census, *City Government Finances*, Washington, D.C.: Government Printing Office, 1909-.

United States Bureau of Census, *County and City Data Book*, Washington, D.C.: Government Printing Office, 1949-.

United States Bureau of Census, *State Government Finances*, Washington, D.C.: Government Printing Office, 1915-.

American Statistics Index, Washington, D.C.: Congressional Information Service, 1973-.

United States Bureau of Census, *Statistical Abstract of the United States*, Washington, D.C.: Government Printing Office, 1878-.

The American Statistics Index (ASI) cited above is a particularly useful source because it assists in finding statistics that appear in the thousands of government publications published each year. Because it is such an important source, we will provide detailed information here on how to use it. The ASI is published in two parts: Index and Abstract. A clothbound "base edition" provides selective coverage of publications from the early 1960's to January 1974. Supplements, also clothbound, provide cumulative coverage of each subsequent year. Monthly updates are also available. The Index provides information by subjects, names and categories while the Abstracts provide bibliographic data, a description of the subject matter and an outline of content with references to specific page ranges. Here are the four steps to follow in using ASI:

1. Search the index to identify publications of interest
2. Note the accession numbers of relevant abstracts
3. Locate and review the abstracts in the ASI Abstracts volume to evaluate the contents of the publications
4. Obtain publications for complete reference.

EXAMPLE FOR EXERCISE 4.4
Obtain Quantitative Data

FIND THREE DIFFERENT STATISTICAL SOURCES. LOOK THROUGH THE TABLE OF CONTENTS OR THE INDEX OF EACH SOURCE FOR TERMS RELEVANT TO YOUR TOPIC. SELECT A RELEVANT STATISTIC. DON'T LOOK FOR THE "PERFECT" STATISTIC, JUST ONE THAT HAS SOME RELEVANCE. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE.)

A. USING AN ALMANAC, FIND ONE STATISTIC RELEVANT TO YOUR SUBJECT. CITE THE ALMANAC, DEFINE THE STATISTIC CLEARLY, AND RECORD THE FIGURE PROVIDED

CITATION: The World Almanac and Book of Facts, 1984

STATISTIC DEFINITION: Total number of waste sites on national priority list in the United States for 1982.

FIGURE: 546

B. USING A YEARBOOK OR OTHER STATISTICAL SOURCE (EXCLUDING ALMANACS), FIND ONE STATISTIC RELEVANT TO YOUR SUBJECT. CITE THE SOURCE, INCLUDING THE PAGE ON WHICH THE STATISTIC IS FOUND, AND DEFINE THE STATISTIC CLEARLY.

CITATION: United States Bureau of the Census, Statistical Abstract of the United States, 1984.

STATISTIC DEFINITION: Estimated number of abandoned waste sites in the United States, 1982.

FIGURE: 30,000-50,000

C. USING THE AMERICAN STATISTICS INDEX (ASI), IDENTIFY ONE STATISTIC RELEVANT TO YOUR SUBJECT. USE THE ASI'S INDEX TO FIND THE SOURCE OF A STATISTIC; RECORD THE DATE OF THE ASI YOU USE AND THE PUBLICATION'S ACCESS NUMBER; FIND THE ABSTRACT IN THE ASI ABSTRACT VOLUME; AND PROVIDE A DEFINITION OF THE STATISTIC. ALSO, INDICATE THE TITLE AND AUTHOR OF THE PUBLICATION.

ASI INDEX DATE: October-December 1977 PUBLICATION ACCESS NUMBER: 7888-21

TITLE AND AUTHOR OF PUBLICATION: Keith M. Goodman and Melinda A. Green "Low-Fare and Fare-Free Transit: Some Recent Applications by United States Transit System"

DESCRIPTION OF THE STATISTIC: Statistics on mass-transit ridership in 41 large cities

EXERCISE 4.4
Obtain Quantitative Data

FIND THREE DIFFERENT STATISTICAL SOURCES. LOOK THROUGH THE TABLE OF CONTENTS OR THE INDEX OF EACH SOURCE FOR TERMS RELEVANT TO YOUR TOPIC. SELECT A RELEVANT STATISTIC. DON'T LOOK FOR THE "PERFECT" STATISTIC, JUST ONE THAT HAS SOME RELEVANCE. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE.)

A. USING AN ALMANAC, FIND ONE STATISTIC RELEVANT TO YOUR SUBJECT. CITE THE ALMANAC, DEFINE THE STATISTIC CLEARLY, AND RECORD THE FIGURE PROVIDED

CITATION:

STATISTIC
DEFINITION:

FIGURE:

B. USING A YEARBOOK OR OTHER STATISTICAL SOURCE (EXCLUDING ALMANACS), FIND ONE STATISTIC RELEVANT TO YOUR SUBJECT. CITE THE SOURCE, INCLUDING THE PAGE ON WHICH THE STATISTIC IS FOUND, AND DEFINE THE STATISTIC CLEARLY.

CITATION:

STATISTIC
DEFINITION:

FIGURE:

C. USING THE AMERICAN STATISTICS INDEX (ASI), IDENTIFY ONE STATISTIC RELEVANT TO YOUR SUBJECT. USE THE ASI'S INDEX TO FIND THE SOURCE OF A STATISTIC; RECORD THE DATE OF THE ASI YOU USE AND THE PUBLICATION'S ACCESS NUMBER; FIND THE ABSTRACT IN THE ASI ABSTRACT VOLUME; AND PROVIDE A DEFINITION OF THE STATISTIC. ALSO, INDICATE THE TITLE AND AUTHOR OF THE PUBLICATION.

ASI INDEX DATE: PUBLICATION ACCESS NUMBER:

TITLE AND AUTHOR OF PUBLICATION:

DESCRIPTION OF THE STATISTIC:

STEP 4.5: Obtain Information on Events--Newspapers and Surveys of Events

Every library subscribes to at least one newspaper, and most subscribe to several. The larger national newspapers have indexes to the paper which allow you to locate events pertaining to your topic.

An event is one of two things: (1) It may be an action in a specific time and place undertaken by an identifiable person, group, or institution. A speech or the passage of a law is a common event that affects policy. Policies and social conditions are not events. For example, the *passage* of a mandatory seat belt law is an event, but the existence of the law or its effect on traffic fatalities is not an event. The unemployment rate in the United States is not an event, but it is an event if the President *announces* the current unemployment rate. (2) An event may be a physical occurrence, at a particular time and place, such as a hurricane or earthquake.

In addition to newspapers, surveys of events provide information on recent happenings. These sources tend to give more information and often include some background information on the topic.

NEWSPAPER INDEXES

Christian Science Monitor Index, Boston: Christian Science Monitor, 1960-.

National Observer Index, Princeton, New Jersey: Dow Jones Books, 1970-.

New York Times Index, New York: Times, 1913-.

Newspaper Index: The Chicago Tribune, The Los Angeles Times, The New Orleans Times - Picayune, The Washington Post, Wooster, Ohio: Bell and Howell, 1972-.

Wall Street Journal Index, New York: Dow Jones and Company, 1958-.

SURVEYS OF EVENTS

Annual Register of World Events, London: Publisher varies, 1758-.

CQ Weekly Report, Washington, D.C.: Congressional Quarterly, 1945-.

Deadline Data on World Affairs, Greenwich, Connecticut: DMS, 1968-.

Facts on File, New York: Facts on File, 1940-.

Keesing's Contemporary Archives, London: Keesing's, 1931-.

EXAMPLE FOR EXERCISE 4.5
Obtain Information on Events

(A) USING THE NEW YORK TIMES INDEX, FIND A REFERENCE TO ONE MAJOR EVENT. RECORD THE PAGE NUMBER OF THE TIMES ARTICLE. (B) NEXT, LOOK UP THE SAME EVENT IN A SURVEY OF EVENTS, SUCH AS FACTS ON FILE. RECORD THE DATES AND PAGE OF THESE ARTICLES. OTHER SOURCES MAY NOT HAVE REPORTED THE EVENT ON THE SAME DATES AS THE TIMES. THEREFORE, CHECK YOUR OTHER SOURCE FOR ONE WEEK PRECEDING AND FOLLOWING THE TIMES PUBLICATION DATE. IF THE EVENT DOES NOT APPEAR IN THE SOURCE, INDICATE THE RANGE OF DAYS YOU ACTUALLY CHECKED. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE.)

EVENT: Reagan calls for "standby" tax increase

A. NEW YORK TIMES INDEX REFERENCE: DATE: 1/26/83
PAGE NO: A1

SOURCE CITATION: New York Times Index, New York City; The New York Times Company, Volume 71, 1983.

B. SURVEY OF EVENTS REFERENCE:

SOURCE TITLE: Facts on File DATE: 1/28/83
PAGE NO: 4

SOURCE CITATION: Facts on File, New York: Facts on File, Volume 43, 1983.

EXERCISE 4.5
Obtain Information on Events

(A) USING THE NEW YORK TIMES INDEX, FIND A REFERENCE TO ONE MAJOR EVENT. RECORD THE PAGE NUMBER OF THE TIMES ARTICLE. (B) NEXT, LOOK UP THE SAME EVENT IN A SURVEY OF EVENTS, SUCH AS FACTS ON FILE. RECORD THE DATES AND PAGE OF THESE ARTICLES. OTHER SOURCES MAY NOT HAVE BEEN REPORTED THE EVENT ON THE SAME DATES AS THE TIMES. THEREFORE, CHECK YOUR OTHER SOURCE FOR ONE WEEK PRECEDING AND FOLLOWING THE TIMES PUBLICATION DATE. IF THE EVENT DOES NOT APPEAR IN THE SOURCE, INDICATE THE RANGE OF DAYS YOU ACTUALLY CHECKED. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE.)

EVENT:

A. NEW YORK TIMES INDEX REFERENCE: DATE:
PAGE NO:

SOURCE CITATION:

B. SURVEY OF EVENTS REFERENCE:

SOURCE TITLE: DATE:
PAGE NO:

SOURCE CITATION:

STEP 4.6: Use United States Government Publications

Every year the United States government publishes thousands of pages of material on many different subjects. These materials can be very valuable in studying public policy issues.

Perhaps the most important publication in this search is the *Monthly Catalog of United States Government Publications*. There are several search strategies that can be employed in locating the government publications that might be helpful. The most frequently used approach is to check the subject index of the *Monthly Catalog*. There is also a title index if you already know the title of the publication you are looking for. As a last resort, you may want to refer to the author index. If you are aware of the government agency associated with the topic, you can refer to the author index in the back of the *Monthly Catalog*.

Among other details, each entry in the *Monthly Catalog* gives the entry number, the author, the title, the date, and the Superintendent of Documents (Su-Doc) number.

Documents may be arranged in the school library in two ways--either cataloged by government author and shelved along with other books, or arranged according to Su-Doc number and cataloged by the *Monthly Catalog*. Consult the librarian on how the collection is organized.

Should more information on government documents be needed, read Joe Morehead, *Introduction to United States Public Documents* (3rd ed.), Littleton, Colorado: Libraries Unlimited, 1983.

EXAMPLE FOR EXERCISE 4.6
Use United States Government Publications

USING THE *MONTHLY CATALOG OF UNITED STATES GOVERNMENT PUBLICATIONS*, LOCATE TWO PUBLICATIONS RELEVANT TO YOUR TOPIC AND GIVE THE ENTRY NUMBER, THE TITLE, THE ISSUING AGENCY, AND THE SU-DOC NUMBER.

PUBLICATION 1:

ENTRY #: 84-4198

TITLE: Efforts to Reduce Taxpayer Burdens

AGENCY: Committee on Finance, United States Senate

SU-DOC #: Y4.F 49:5.hrg.98-197

PUBLICATION 2:

ENTRY #: 84-14039

TITLE: Tax Law and Simplification Act of 1983

AGENCY: Committee on Ways and Means, House of Representatives

SU-DOC #: Y4.W 36:98-40

EXERCISE 4.6
Use United States Governments Publications

USING THE MONTHLY CATALOG OF UNITED STATES GOVERNMENT PUBLICATIONS, LOCATE TWO PUBLICATIONS RELEVANT TO YOUR TOPIC AND GIVE THE ENTRY NUMBER, THE TITLE, THE ISSUING AGENCY, AND THE SU-DOC NUMBER.

PUBLICATION 1:

ENTRY #:

TITLE:

AGENCY:

SU-DOC #:

PUBLICATION 2:

ENTRY #:

TITLE:

AGENCY:

SU-DOC #:

STEP 4.7: Use United States Census Data

A special type of government document is information published by the United States Bureau of the Census. Every 10 years the Bureau collects information on population and housing for the entire country. This information is updated within the 10 year period through estimates and sample surveys.

The Census Bureau breaks the nation down in several ways. These are:

1. Regions/Division: There are four census regions (west, south, northeast, and north central) defined by the United States Census Bureau, each composed of two or more divisions. Divisions are areas composed of groupings of contiguous states.

2. Standard Metropolitan Statistical Areas (SMSAs): In 1970 an SMSA comprised a county containing a central city (or twin cities) of 50,000 or more, plus contiguous counties which were socially and economically integrated with the central county. All counties in SMSAs are termed "metropolitan," and all others "nonmetropolitan."

3. Urbanized Areas (UAs): UAs comprise a central city of an SMSA, plus the surrounding closely settled urban fringe ("suburbs").

4. Urban/Rural: The urban population comprises all persons living in urbanized areas and in places of 2,500 or more outside urbanized areas. Everyone else is considered rural.

5. Unincorporated Places: A concentration of population which is not legally incorporated. Suitable boundaries are defined for statistical purposes by the Census Bureau with local assistance. Unincorporated places of less than 1,000 inhabitants are disregarded.

6. Census Tracts: Subdivisions of SMSAs averaging 4,000 population, covering all SMSAs for 1970. Tracts are defined by local committees and are frequently used to approximate neighborhoods.

7. Enumeration Districts (EDs): Administrative divisions set up by the Census Bureau to take the census in areas where enumerators were used, averaging 800 population. Outside of urbanized areas, this is the smallest geographic unit of analysis, and all other areas such as tracts, places, and MCDs can be defined as a collection of EDs.

8. *Block Groups (BGs)*: Groups of city blocks, averaging 1,000 population, which take the place of enumeration districts in 145 large urbanized areas where the census was taken by mail in 1970.

9. *Blocks*: City blocks are areas generally bound by four streets or some other physical boundary, defined in urbanized areas and in additional cities which contracted with the Bureau for collection of block statistics.

The Census Bureau gathers information on many items under the two main headings of population and housing. Information includes:

POPULATION ITEMS

- Relationship to head of household
- Color or race
- Age
- Sex
- Marital status

HOUSING ITEMS

- Number of housing units at this address
- Telephone
- Complete kitchen facilities
- Rooms
- Water supply
- Flush toilet
- Bathtub or shower
- Owner/renter
- Commercial establishment on property
- Value

The information gathered is compiled in a series of reports covering a variety of areas and subjects. To find a specific subject the best source is the *1980 Census of Population and Housing*. A general guide to the use of census data is the *1980 Census User's Guide*. Both of these publications are available from the Data User Services Division, United States Bureau of the Census, Washington, D.C. and can be found in many libraries.

EXAMPLE FOR EXERCISE 4.7
Use United States Census Data

A. CHOOSE A SMSA (STANDARD METROPOLITAN STATISTICAL AREA), PERHAPS THE AREA IN WHICH YOU LIVE, AND COMPLETE THE FOLLOWING CHART:

MY SMSA IS: Nassau-Suffolk New York (253)

B. USING THE 1980 CENSUS TRACT REPORT FOR THIS SMSA, LOCATE THE FOLLOWING INFORMATION FOR YOUR SMSA. DATA IS PRESENTED IN A SERIES OF TABLES AND YOU NEED TO FIND THE APPROPRIATE TABLE.

CATEGORY	DATA
TOTAL PERSONS:	2,605,813
PERSONS PER HOUSEHOLD:	3.16
MARRIED COUPLE FAMILIES:	602,933
PERSONS OF SPANISH ORIGIN:	101,935
MEDIAN FAMILY INCOME:	$24,227

EXERCISE 4.7
Use United States Census Data

A. CHOOSE A SMSA (STANDARD METROPOLITAN STATISTICAL AREA), PERHAPS THE AREA IN WHICH YOU LIVE, AND COMPLETE THE FOLLOWING CHART:

MY SMSA IS:

B. USING THE 1980 CENSUS TRACT REPORT FOR THIS SMSA, LOCATE THE FOLLOWING INFORMATION FOR YOUR SMSA. DATA IS PRESENTED IN A SERIES OF TABLES AND YOU NEED TO FIND THE APPROPRIATE TABLE.

CATEGORY	DATA
TOTAL PERSONS:	
PERSONS PER HOUSEHOLD:	
MARRIED COUPLE FAMILIES:	
PERSONS OF SPANISH ORIGIN:	
MEDIAN FAMILY INCOME:	

STEP 4.8: Use Microforms

In order to save space, back issues of many newspapers, some periodicals, and numerous United States government and international documents are put onto microforms. This process makes it possible for a library to hold much more in the way of past issues, and provides a way to keep material without having to worry about the decay or destruction of the printed material through age or constant use. There are several types of microforms:

- Microfilm: Microfilm is a reel of film, usually 100 feet (30m) long and 16mm or 35mm wide, containing photographic records of the material. It is the standard format for backruns of journals and newspapers.

- Microfiche: Microfiche is a piece of film, usually 4 inches by 6 inches, containing either 60 or 98 frames or pictures on a card in a grid pattern.

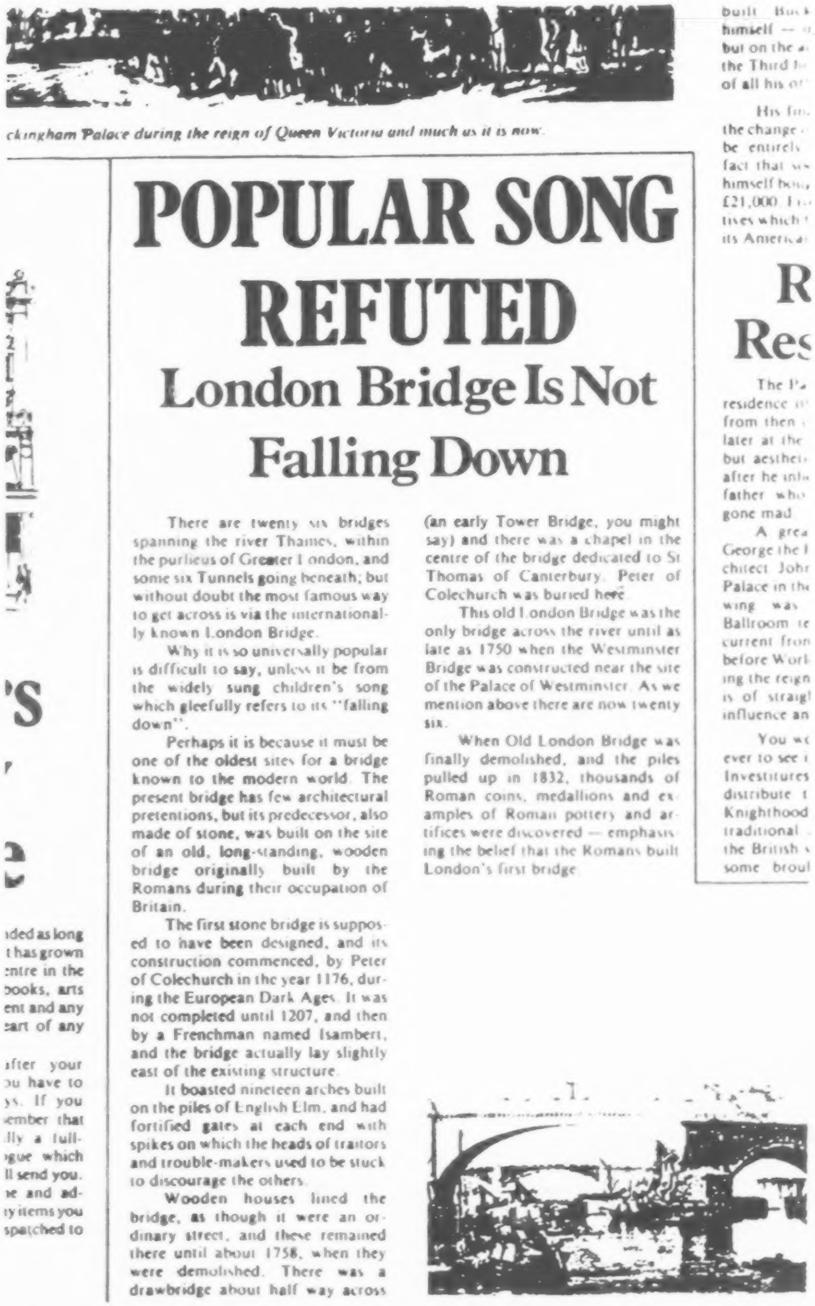
- Micro-opaque: Because of the cost and difficulty of manufacture, these microforms are becoming obsolete. Micro-opaque is an opaque card with information printed on both sides. Unlike microfilm and microfiche, micro-opaque is read by reflecting light off the surface rather than shining light through it.

  A. Microcard: Microcard is a 3 inch by 5 inch piece of micro-opaque.

  B. Microprint: Microprint cards are 9 inch by 6 inch micro-opaques.

EXAMPLE FOR EXERCISE 4.8
Use Microforms

USING A NEWSPAPER INDEX SUCH AS THE NEW YORK TIMES INDEX, LOCATE AN ARTICLE ON A MICROFORM THAT PROVIDES EITHER HISTORICAL OR GENERAL BACKGROUND INFORMATION ON YOUR TOPIC. HAVE THIS ARTICLE REPRODUCED ONTO PAPER AND ATTACH IT TO THIS PAGE.



ckingham Palace during the reign of Queen Victoria and much as it is now.

POPULAR SONG REFUTED

London Bridge Is Not Falling Down

There are twenty six bridges spanning the river Thames, within the purlieus of Greater London, and some six Tunnels going beneath; but without doubt the most famous way to get across is via the internationally known London Bridge.

Why it is so universally popular is difficult to say, unless it be from the widely sung children's song which gleefully refers to its "falling down".

Perhaps it is because it must be one of the oldest sites for a bridge known to the modern world. The present bridge has few architectural pretentions, but its predecessor, also made of stone, was built on the site of an old, long-standing, wooden bridge originally built by the Romans during their occupation of Britain.

The first stone bridge is supposed to have been designed, and its construction commenced, by Peter of Colechurch in the year 1176, during the European Dark Ages. It was not completed until 1207, and then by a Frenchman named Isambert, and the bridge actually lay slightly east of the existing structure.

It boasted nineteen arches built on the piles of English Elm, and had fortified gates at each end with spikes on which the heads of traitors and trouble-makers used to be stuck to discourage the others.

Wooden houses lined the bridge, as though it were an ordinary street, and these remained there until about 1758, when they were demolished. There was a drawbridge about half way across (an early Tower Bridge, you might say) and there was a chapel in the centre of the bridge dedicated to St Thomas of Canterbury. Peter of Colechurch was buried here.

This old London Bridge was the only bridge across the river until as late as 1750 when the Westminster Bridge was constructed near the site of the Palace of Westminster. As we mention above there are now twenty six.

When Old London Bridge was finally demolished, and the piles pulled up in 1832, thousands of Roman coins, medallions and examples of Roman pottery and artifices were discovered — emphasising the belief that the Romans built London's first bridge.

BEST COPY AVAILABLE

EXERCISE 4.8
Use Microforms

USING A NEWSPAPER INDEX SUCH AS THE NEW YORK TIMES INDEX, LOCATE AN ARTICLE ON A MICROFORM THAT PROVIDES EITHER HISTORICAL OR GENERAL BACKGROUND INFORMATION ON YOUR TOPIC. HAVE THIS ARTICLE REPRODUCED ONTO PAPER AND ATTACH IT TO THIS PAGE.

STEP 4.9: Locate Books

Although much of the information required for research can be found in journals and newspapers, you often need in-depth, detailed information, which can be found only in books. By becoming more familiar with the system of organization in your library, the job of locating books becomes much easier. Most libraries use one of two major coding systems for organizing a library collection: the Library of Congress System, or the Dewey Decimal System. An increasing number of libraries have computer-based systems. For these libraries, you should use that system rather than the card catalog.

Under the Library of Congress System, the books are coded by a combination of numbers and letters. The first letter (or just two letters) denotes the subject heading. The classifications are:

A - General Works and Polygraphy
B - Philosophy and Religion
C - Universal History
E-F - American History
G - Geography and Anthropology
H - Social Sciences
J - Political Science
K - Law
L - Education
M - Music
N - Fine Arts
P-O - Language and Literature
Q - Science
R - Medicine
S - Agriculture
T - Technology
U - Military Science
V - Naval Science
W - Bibliography and Library Science

The Dewey System divides all books into 10 major categories, each category bearing a number. The major divisions are:

000 - General Works
100 - Philosophy and Related Disciplines
200 - Religion
300 - The Social Sciences
400 - Languages
500 - Pure Sciences
600 - Technology (Applied Sciences)
700 - The Arts
800 - Literature and Rhetoric
900 - General Geography and History and Their Auxiliaries (including biography)

Each of these categories can be divided into 10 more subdivisions. Since we are dealing primarily with the Social Sciences, it is useful to know how the Dewey System breaks down the 300 category:

300 - General
310 - Statistics
320 - Political Science
330 - Economics
340 - Law
350 - Public Administration
360 - Welfare
370 - Education
380 - Commerce
390 - Customs and Folklore

By knowing these classification systems, you can tell, to some extent, by looking at the number what the book is about and whether it is useful. The first step in looking for books is to determine the call number of the book. This is done through either the card catalog or the computer search system available in your library.

The card catalog generally contains at least three cards for every book in a library collection--title card, author card, and subject card. For the most part, these cards contain the same information, but are filed differently in the alphabetically ordered catalog.

Each card contains information on title, author(s), or editor, place and date of publication, number of pages, size, contents, call number, and tracings. The tracings indicate other subject headings under which this book is located, and can also lead to additional titles on the same subject. Some books have tracings on all three cards, but others list tracings only on the author card.

The card catalog will be one of two types, divided or non-divided. The divided catalog will have author and title cards in the same file, with the subject cards filed separately. The nondivided dictionary catalog will have all three types of cards indexed together in the same file.

Computer search systems provide more rapid and varied procedures for searching for books. Most systems are organized around the same categories as the card catalog--title, author, and subject. In addition, some systems allow you to find a book if you know the call number or to find a title if you know two or three words in the title but not the exact title. Check the information on the computer system in your library carefully. You will find it more efficient than the card library for most types of searches.

The best place to begin a search is under the subject. If you cannot find a related subject listed in the card catalog or search system, check the Library of Congress List of Subject Headings. This is a guide to subject headings used in college and university libraries throughout the country—and in many other types of libraries as well. The list not only provides subject headings which may be used, but also includes cross-references to other terms.

Example:

Discrimination in employment (Indirect)
(HD4903)
sa Affirmative action programs
Age and employment
Blacklisting, Labor
Equal pay for equal work
Sex discrimination in employment
Trade-unions--Minority membership subdivision
Employment under names of racial or social
groups, e.g., Afro-Americans--Employment;
Women—Employment
x Employment discrimination
Equal employment opportunity
Equal opportunity in employment
Fair employment practice
Job discrimination
xx Discrimination
Labor and laboring classes
Personnel management
Race discrimination
Right to labor
Trade-unions--Minority membership
— Law and legislation (Indirect)
xx Labor Laws and legislation

Discrimination in employment is a subject heading which may be used. The letters sa indicate more specific headings or related terms which may also be used (Equal pay for equal work; Women - Employment). The letter x indicates terms which are not used as subject headings. The letters xx indicate terms which are used, but which are broader terms. The symbol - indicates a subdivision, or more specific term. In the example above, Discrimination in employment - Law and legislation is also a subject heading which can be used.

Finally, there are See references. These are made from terms not used to terms which are used. For example, Labor unions see Trade-unions indicates that material about labor unions will be located under the subject heading Trade-unions.

Once you have identified the book you want in the card catalog, locate it on the shelf. The call number in the upper left corner of the card is the code, either Dewey or Library of Congress, for the books. Books are arranged numerically for the Dewey and alpha-numerically for the Library of Congress.

EXAMPLE FOR EXERCISE 4.9
Locate Books

COMPLETE EACH OF THE FOLLOWING TASKS AND WRITE YOUR ANSWERS IN THE SPACE PROVIDED.

A. USING THE COMPUTER SEARCH SYSTEM IN YOUR LIBRARY, LIST TWO ENTRIES YOU USED TO FIND BOOKS ON YOUR SUBJECT. (IF YOUR LIBRARY HAS NONE, USE THE CARD CATALOG.)

SEARCH CODE AND WORDS: TI: Tax Reform
WD: Income Tax

B. IDENTIFY TWO BOOKS THAT YOU FOUND THROUGH YOUR SEARCH, PROVIDE A COMPLETE CITATION AND WRITE A BRIEF ANNOTATION OF THE BOOK. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE.)

CITATION 1: Goode, Richard B.
Options for Tax Reform: Papers
Brookings Institution, Washington, D.C., 1984

ANNOTATION: This book presents the precedings of a conference on Tax reform which was held by the Tax Foundation in New York on December 5, 1972. Since the congressional leaders and the Administration had promised that proposals to reform the Federal income tax would be considered in 1973, the conference was held to explore the kind of changes needed to make the tax system more equitable and less of a burden on the nations growth.

CITATION 2: Tax Foundation, Inc.
Challenge of Tax Reform
Tax Foundations Inc., New York, 1972

ANNOTATION: Since 1976, legislation has reduced the rate of tax applying to the earnings of a second worker in a married couple, lowered on the top marginal rate on the individual income from 70 to 30%, and lowered the remaining marginal rates by 23%. Also, corporate rates have been reduced slightly. These changes, however, do not add up to a significant alteration in the tax system. Currently, there is support for a low rate, broad based income tax in the United States. This book describes these and other issues of tax reform.

EXERCISE 4.9
Locate Books

COMPLETE EACH OF THE FOLLOWING TASKS AND WRITE YOUR ANSWERS IN THE SPACE PROVIDED.

A. USING THE COMPUTER SEARCH SYSTEM IN YOUR LIBRARY, LIST TWO ENTRIES YOU USED TO FIND BOOKS ON YOUR SUBJECT. (IF YOUR LIBRARY HAS NONE, USE THE CARD CATALOG.)

SEARCH CODE AND WORDS:

B. IDENTIFY TWO BOOKS THAT YOU FOUND THROUGH YOUR SEARCH, PROVIDE A COMPLETE CITATION AND WRITE A BRIEF ANNOTATION OF THE BOOK. (PAY SPECIAL ATTENTION TO THE FORM OF THE CITATION AND FOLLOW IT EXACTLY AS IT APPEARS IN THE EXAMPLE EXERCISE.)

CITATION 1:

ANNOTATION:

CITATION 2:

ANNOTATION:

STEP 4.10: Relate Information to Components of Public Policy Issues

We have just reviewed the major tools for locating information in the library. As you conduct library research on a public policy issue in the remaining chapters of this book, you will learn how to use these tools more efficiently. To help you, at this point you should reflect on how the information you have found relates to the components of public policy issues discussed in Chapter 1: players, social conditions, public policies, and the interrelationship of these three (Arrows A, B, and C).

EXAMPLE FOR EXERCISE 4.10
Relate Information to Components of Public Policy Issues

FOR EACH OF THE ITEMS YOU FOUND IN EXERCISES 4.3-4.9, INDICATE FOR WHICH OF THE SIX COMPONENTS THE INFORMATION IS MOST LIKELY TO BE USEFUL BY PUTTING AN "X" IN THE APPROPRIATE COLUMN.

EXERCISE	ITEM	PUBLIC POLICY DESCRIPTION	SOCIAL CONDITION DESCRIPTION	PLAYER DESCRIPTION	ARROW A	ARROW B	ARROW C
4.3 A (ARTICLE)	Mexican Drug Enforcement		X				
4.3 B (ARTICLE)	Fair Trade With 3rd World	X					
4.4A (STATISTICS)	Waste sites in United States		X				
4.4B (STATISTICS)	Waste sites in United States		X				
4.4C (STATISTICS)	Mass Transit ridership		X		X		
4.5 (EVENT)	Tax Increase Announced by Reagan					X	
4.6 (PUBLICATION 1)	Taxpayer's burden		X				
4.6 (PUBLICATION 2)	Tax laws	X					
4.7 (CENSUS DATA)	Nassau-Suffolk County		X				
4.8 (ARTICLE)	London Bridges						X
4.9 (BOOK 1)	Tax Reform				X		
4.9 (BOOK 2)	Tax Reform	X					

EXERCISE 4.10
Relate Information to Components of Public Policy Issues

FOR EACH OF THE ITEMS YOU FOUND IN EXERCISES 4.3-4.9, INDICATE FOR WHICH OF THE SIX COMPONENTS THE INFORMATION IS MOST LIKELY TO BE USEFUL BY PUTTING AN "X" IN THE APPROPRIATE COLUMN.

EXERCISE	ITEM	PUBLIC POLICY DESCRIPTION	SOCIAL CONDITION DESCRIPTION	PLAYER DESCRIPTION	ARROW A	ARROW B	ARROW C
4.3 A (ARTICLE)							
4.3 B (ARTICLE)							
4.4A (STATISTICS)							
4.4B (STATISTICS)							
4.4C (STATISTICS)							
4.5 (EVENT)							
4.6 (PUBLICATION 1)							
4.6 (PUBLICATION 2)							
4.7 (CENSUS DATA)							
4.8 (ARTICLE)							
4.9 (BOOK 1)							
4.9 (BOOK 2)							

SUMMARY

You have just been introduced to a variety of library resources that will enable you to locate information you want as quickly and painlessly as possible. This basic training will help you whenever you need to search for information in the library.

TABLE 4.1: REVIEW

TYPE OF INFORMATION	SEARCH TOOLS	EXAMPLE
Definitions	Dictionaries and encyclopedias	Fiscal — "pertaining to the public treasury or revenues"
Scholarly and journalistic analysis	Indexes, abstracts, card catalogs, and computer search systems for books and articles	PAIS
Statistical information on conditions	Almanacs, yearbooks, and other statistical sources	Number of automobile fatalities in the United States
Information on events	Newspaper indexes and surveys of events and microforms	Congressional budget officers urge Congress to raise taxes 2/11/83
Government information	Monthly Catalog, Census Publications	"Background on Federal Income Tax compliance"

CHAPTER 5

USING SURVEYS

Surveys are a vital part of the process of gathering information about social conditions and public policy. This chapter introduces the steps you need to follow in order to gather information on public policy issues through surveys and interviews.

OBJECTIVE

On completion of this chapter, you should be able to make the basic decisions required to design a survey including defining the purpose, selecting the sample, writing questions, planning the method of contact, estimating costs, and minimizing bias.

INTRODUCTION

Surveys and interviews can be a vital source of information for the study of a public policy issue. They can range in form from open-ended interviews of a few key public officials to a mail survey to thousands of people. Although time consuming and tedious to develop and implement, surveys and interviews may be the only way to get key information on social conditions underlying public policy issues or on levels of support and opposition to policies designed to deal with those conditions. In addition, they provide more up-to-date information than is usually available in print form.

STEP 5.1: Decide on the Purpose of a Survey

Surveys may be used to forecast how people will behave under specified conditions, or whether they would support or oppose a proposed policy. Surveys may also be used to determine the perceived needs of a group or region for increased facilities, such as a hospital, new road, or new library. In general, surveys may be used to provide information that can be used in any of the five types of policy analysis activities: monitoring, explaining, evaluating, forecasting, or prescribing. However, the survey itself simply provides the information that policy makers or policy analysts can use. Therefore, whenever you are planning a survey relevant to policy, you must have in mind not only what the topic of the survey is and whom you will survey, but also for whom the information is to be gathered, and what uses will be made of the information by those to whom the results are provided.

The most essential step in developing a plan to gather information from people is to decide on the purpose of the survey or interview. You need to ask yourself what kind of information you require. There are two types of information that might be obtained—factual and attitudinal.

- Factual information about social conditions and public policies might consist of what people usually do, their incomes, the physical environment which surrounds them, or trends in government action. For example, a study of mandatory seat belts in New York State might ask people whether or not they personally use seat belts. The information derived from such a question would indicate how many people use seat belts.

- Attitudinal information indicates how people feel and think about social conditions or about public policies designed to deal with those conditions. In the mandatory seat belt example, a survey might determine how people felt about the policy.

Part of identifying the purpose of the survey is to clearly define the "target population," the group of people about which you wish to know more. The most well-known types of surveys are public opinion surveys of a large sample of the mass public. However, smaller sample surveys of specialized groups are often more useful in policy analysis because key groups of people may be more knowledgeable about a policy, or in a better position to influence policy. Therefore, when conducting a survey you may wish to sample players especially affected by a policy or players which are in a key position to provide information about policy or to influence the policy-making process. For example, in a survey of the uses of food stamps, surveying a sample drawn from the users of food stamps would be more appropriate than a survey of the general population.

Even when large-scale surveys are undertaken, as in a pre-election survey, sophisticated pollsters attempt to sample those members of the general population who are most likely to vote. One consideration to keep in mind when defining the target population is its size, at least approximately. This is a necessary part of the definition of the population because it will help you, among other things, determine the method of surveying and the size of your sample. Defining the target population consists of two steps:

1. State the geographic scope of the target population. If the study is about national attitudes toward health care services, it is not enough to study people in a single city or state. On the other hand, if the study relates to a state policy, don't do a national survey.

2. Indicate what age, occupation, sex or other characteristics might apply to your target population. A study on how food stamps are used, for example, would focus on a sample of those individuals who are using food stamps.

A final factor to consider in developing the purpose for your survey is who will be using the information gathered. Public policy surveys are always done for one or more players. This may lead to biased results. A research design may reflect the preferences or interests of the person, group, or agency for which the survey is being done. This is not so much a problem of deliberate cheating, but one of unconsciously wanting to give a client or audience some pleasing, rather than disturbing, results.

Therefore, make sure that the sampling procedures, the questions in the survey, and the possible closed-response answers afford an equal opportunity for gathering unpleasant or undesired information as well as information that would please the audience of the survey results. As in other cases of bias, it is sometimes a good idea to over-compensate by making it even easier for the respondent to provide negative information. Also, be prepared to distribute the results of your sampling, survey design, and results to independent experts or, better yet, competing players concerned with the policy. In this way, you will at least give critics the chance to point out any clear distortions that have been incorporated into the survey design.

EXAMPLE FOR EXERCISE 5.1
Decide on the Purpose of a Survey

INDICATE THE PURPOSE OF YOUR SURVEY. (A) INDICATE THE TOPIC OF YOUR SURVEY. (B) IDENTIFY THE TARGET POPULATION WHICH YOU WILL SAMPLE FOR YOUR SURVEY, INCLUDING THE SIZE OF THE POPULATION. (C) IDENTIFY WHAT FACTUAL AND ATTITUDINAL INFORMATION YOU WILL GATHER. (D) SPECIFY FOR WHOM THE INFORMATION BEING GATHERED, WHAT DECISION WILL BE MADE, AND, BIAS THAT MIGHT RESULT FROM WHAT THE CLIENT WANTS TO SEE. (E) INDICATE HOW THE INFORMATION GATHERED IN THE SURVEY WILL BE USED IN ONE OR MORE OF THE FIVE TYPES OF ANALYSIS.

A. TOPIC OF SURVEY:
The question of whether more hospital beds are needed in the Syracuse metropolitan area.

B. TARGET POPULATION (INCLUDING SIZE):
All practicing physicians who regularly refer patients to the hospitals in the Syracuse metropolitan area. This consists of approximately 2800 doctors.

C. FACTUAL AND ATTITUDINAL INFORMATION TO BE GATHERED:
Factual: (1) What difficulties have the doctors experienced in getting their patients admitted to Syracuse area hospitals. (2) Has this differed between elective surgery and emergency cases?
Attitudinal: (3) Do doctors feel that more bed space is necessary? (4) What preferences do they have for types of expansion--general use, psychiatric, or other specialized hospital facilities.

D. FOR WHOM IS THE INFORMATION BEING GATHERED, WHAT DECISION WILL BE MADE, AND WHAT BIAS MIGHT RESULT:
The information will be provided to the Syracuse Community Hospital Planning Committee, which has representatives from all the area hospitals. Based on the results of this survey (and other information), the committee will decide whether to request state funds to expand area hospitals. If the committee does decide to expand hospital facilities, the results of this survey will also be provided to the state, along with the request for funds. Most planning committee members favor increasing the number of beds because they want to get heir share of state funds.

E. USES TO BE MADE OF THIS INFORMATION:
This information will be used to monitor existing uses of hospital beds and to forecast future uses. It will also be used to evaluate whether or not conditions now are unsatisfactory. Finally, it will be used to explore alternative prescriptions.

EXERCISE 5.1
Decide on the Purpose of a Survey

INDICATE THE PURPOSE OF YOUR SURVEY. (A) INDICATE THE TOPIC OF YOUR SURVEY. (B) IDENTIFY THE TARGET POPULATION WHICH YOU WILL SAMPLE FOR YOUR SURVEY, INCLUDING THE SIZE OF THE POPULATION. (C) IDENTIFY WHAT FACTUAL AND ATTITUDINAL INFORMATION YOU WILL GATHER. (D) SPECIFY FOR WHOM THE INFORMATION BEING GATHERED, WHAT DECISION WILL BE MADE, AND, BIAS THAT MIGHT RESULT FROM WHAT THE CLIENT WANTS TO SEE. (E) INDICATE HOW THE INFORMATION GATHERED IN THE SURVEY WILL BE USED IN ONE OR MORE OF THE FIVE TYPES OF ANALYSIS.

A. TOPIC OF SURVEY:

B. TARGET POPULATION (INCLUDING SIZE):

C. FACTUAL AND ATTITUDINAL INFORMATION TO BE GATHERED:

D. FOR WHOM IS THE INFORMATION BEING GATHERED, WHAT DECISION WILL BE MADE AND WHAT BIAS MIGHT RESULT:

E. USES TO BE MADE OF THIS INFORMATION:

STEP 5.2: Choose a Sample

In choosing a sample two decisions have to be made: sample size and method of selection. In most cases, it is impossible to survey everyone in the target population. Therefore, it is necessary to select a portion of the target population that best represents the target population. The goal of a sample is to come up with a group of respondents whose responses would be representative of the population as a whole.

SAMPLE SIZE

The absolute size of a sample is more important than the percentage of the total population sampled. (This assumes, of course, that the sample was correctly selected.) Accurate samples of the total United States population can consist of as few as 2,000 people. A sample of this size represents only about .00001 of the total population, but, when correctly selected, can give a highly accurate representation of the entire population. Surveys of the population of much smaller units, such as a city, or the practicing lawyers in a certain region, are often still in the range of 1000-2000. Of course, if the population itself is much smaller, a survey must be based on a sample of a much larger proportion of the population in order to keep the absolute size large enough so that it can be analyzed properly. In those cases where the target population is less than 50, the survey should include all members of the population. When all members of a population are surveyed, it is called a census. Aside from size of the target population, the other factor in sample size is the complexity of the analysis to be made of the survey results. If the mere total response are of interest (which is rarely the case in policy analysis), then a sample of 100 or even 50 would be adequate. But if a more complex analysis is to be done, such as how different sub-groups of the sample respond, then a sample size of 1000-2000 is required.

SAMPLE SELECTION

Sampling can be either through random or non-random methods. In non-random sampling, subjects are not selected by chance; they do not all have an equal probability of being chosen. One thing that should be kept in mind is that a sampling procedure is never good or bad itself--it must be evaluated by its ability to satisfy the objectives of the survey given the amount of time and money available. Although random is preferred in every case, time, and respondent availability sometimes make random sampling untenable. Non-random sampling is also called haphazard sampling. Examples include contacting shoppers at a shopping center, or calling up the first hundred people on a phone list. The procedure does not allow the survey designer to generalized beyond the people being interviewed. In survey research, the word "random" is used in a very specific technical sense. A random sampling procedure is one in which all subjects have an equal chance of being selected. The term "random" does not mean haphazard or arbitrary as it frequently does in ordinary conversation.

Two of the most frequently used random sampling methods are: (1) simple random sampling, and (2) cluster sampling.

1. Simple Random Sampling

This method chooses each subject from a list of members of the target population through a random process in which each unselected subject has the same chance of being chosen as any other subject on each draw. The selection of a particular name could be made on the basis of flipping a coin, tossing a pair of dice, or most commonly, with some type of random-number generator, using a random-number table or a computer program. Following a random start, every nth subject is included to make up the sample of the desired size. This process continues until a sufficient number of subjects has been selected. Generally, once a subject has been chosen, the subject is not eligible to be selected a second time.

Simple random sampling may not be feasible for a number of reasons. For example, a current and complete list of the subjects in a target population may not be available. For this and other reasons, researchers have developed successful variations on simple random sampling which are vastly better than non-random procedures.

2. Cluster Sampling

As the name implies, cluster sampling involves choosing the subjects to be interviewed in clusters or groups, rather than singly as done in simple random sampling. An example of cluster sampling is choosing a statewide sample by randomly selecting cities, neighborhoods within cities, houses within neighborhoods, and individuals within houses. A random selection is made of these natural clusters and within each cluster either all the subjects can be interviewed or a random sample of the subjects can be contacted. This procedure will most likely produce results that are slightly less accurate than those from a single random sample. That may be a small price to pay, however, compared to the increased convenience and reduce costs of a cluster sample as opposed to a simple random sample. A complete list of such a population as all the the citizens of a state does not exist. But a complete list of all cities within a state, all neighborhoods within each city, and all houses (addresses) within each neighborhood does exist. This is why cluster sampling is so often used. Usually, the clusters are naturally occurring groups within the target population, for example, the banks, hospitals, or voter precincts in a community.

SAMPLING BIAS

The sampling procedure may over-sample or under-sample certain categories of respondents. For example, a list of all the doctors in a certain region may not be completely up to date and thus will under-report younger doctors and those recently moved into the area. Sampling directly from the telephone will have the same source of bias. Using the telephone directory will also bypass any individuals who do not own a telephone or who have unlisted telephone numbers.

Therefore, make sure the bias likely to be found in your sampling procedure will not seriously affect the results of your survey in any way that is critical to the purposes for which you are doing the survey. For example, if you feel omitting people with unlisted telephone numbers will seriously misrepresent your target population, you may take any of the following steps:

- Supplement with a door to door survey
- Randomly dial numbers
- Acknowledge the bias in your report and specify how this bias may affect your survey results.

EXAMPLE FOR EXERCISE 5.2
Choose a Sample

(A) INDICATE THE TOTAL SIZE OF THE SAMPLE, AND THE APPROXIMATE PERCENTAGE THIS REPRESENTS OF THE TARGET POPULATION. (B) INDICATE WHICH OF THE RANDOMIZING PROCEDURES YOU WILL USE TO SELECT THE SAMPLE. BE SPECIFIC AS TO THE PROCEDURES YOU WILL FOLLOW TO SELECT THE ACTUAL NAMES TO BE CONTACTED. (C) IDENTIFY ONE OR MORE MAJOR SOURCES OF SAMPLING BIAS AND WHAT REMEDIES YOU WOULD TAKE.

A. SIZE OF SAMPLE, AND PERCENTAGE OF TARGET POPULATION:
A sample of 300 doctors will be selected, approximately 10% of the target population.

B. SAMPLING PROCEDURE:
From the Onondaga County Medical Association a list will be obtained of all doctors who regularly refer patients to the area hospitals. Since a complete and current list of the target population is available, simple random sampling can be used. A table of random numbers will be used to determine the first name and then every tenth name will be selected from this list.

C. BIAS AND REMEDY:
The listing of the doctors may not be up to day thus under-sampling some doctors, such as those in family practice. An attempt will be made to obtain recent supplements of all names. Doctors in the newer family practice will be allowed to state their specialty so we can see if they are in fact under-presented. If so, a higher percentage of these doctors will be sampled.

EXERCISE 5.2
Choose a Sample

(A) INDICATE THE TOTAL SIZE OF THE SAMPLE, AND THE APPROXIMATE PERCENTAGE THIS REPRESENTS OF THE TARGET POPULATION. (B) INDICATE WHICH OF THE RANDOMIZING PROCEDURES YOU WILL USE TO SELECT THE SAMPLE. BE SPECIFIC AS TO THE PROCEDURES YOU WILL FOLLOW TO SELECT THE ACTUAL NAMES TO BE CONTACTED. (C) IDENTIFY ONE OR MORE MAJOR SOURCES OF SAMPLING BIAS AND WHAT REMEDIES YOU WOULD TAKE.

A. SIZE OF SAMPLE, AND PERCENTAGE OF TARGET POPULATION:

B. SAMPLING PROCEDURE:

C. BIAS AND REMEDY:

STEP 5.3: Decide on a Method of Contact

Once the population and the sampling procedure have been determined, it is necessary to decide how respondents will be contacted. Three methods are possible--the face-to-face interview, the telephone interview, and the mail questionnaire. Each method has different strengths and limitations.

FACE-TO-FACE INTERVIEWS

Face-to-face interviews have several advantages:

- The interviewer can stimulate the subject's initial interest, which, in turn, increases the probability that the person will take part in the survey.
- By creating a supportive atmosphere for answering the questions, the interviewer may increase the subject's motivation to respond in a thorough and straightforward fashion.
- The interviewer has more flexibility in asking questions and can clear up any ambiguities in the subject's response. (With a mail questionnaire, the subject may skip those questions not fully understood, thereby reducing the accuracy of the survey).
- Using an interviewer to administer the questionnaire reduces the problem that might occur with a mail questionnaire due to the literacy or educational level or visual acuity of the subjects.

On the other hand, face-to-face interviews also have several disadvantages:

- High cost. An interviewer must be paid a salary, and travel and other expenses involved with being out in the field.
- Interview turnover. The interviewer might get bored with the survey, become ill, leave town, or find another job, creating the perennial problem of interviewer turnover.
- Lack of objective interpreting. Personal interviewers themselves may be biased in one direction or another so that presentation of the questionnaire may differ.
- People may not be willing to discuss personal or embarrassing issues in a face-to-face setting. The subject may feel more comfortable answering certain questions on paper, rather than responding to a stranger.

TELEPHONE INTERVIEWS

This method has many of the strengths of a face-to-face interview and is substantially cheaper to conduct. In addition, subjects suspicious of a person on their doorstep might be willing to talk to the same person over the telephone. However, the telephone survey also suffers from serious limitations, among which is the difficulty of establishing and maintaining the level of rapport that can be developed with a face-to-face interview. The second problem is that the subject can terminate the interview by simply hanging up the phone. Thus, the questionnaire used in a telephone survey must be short and easy to answer.

MAIL QUESTIONNAIRES

The major advantage of mail surveys is their relatively low cost, while their major limitation is their low response rate. Three factors should be kept in mind when developing a mail survey.

- The more work a subject is required to perform, such as answering a long questionnaire or searching for a stamp, the lower the response rate.

- A personally typed cover letter or the use of first class mail very likely will increase the response rate.

- The greater the subject's interest in the outcome of the survey (for example, a survey within a company concerning salary increases), the higher the response rate will be.

EXAMPLE FOR EXERCISE 5.3
Decide on a Method of Contact

(A) INDICATE WHICH OF THE THREE METHODS OF CONTACT YOU WOULD USE, (B) JUSTIFY YOUR SELECTION, AND (C) IDENTIFY ONE OR MORE SOURCES OF BIAS FROM YOUR METHOD OF CONTACT AND WHAT REMEDIES YOU WOULD TAKE.

A. METHOD:
Mail (with telephone follow-up to non-respondents).

B. WHY:
Given the size of the sample and the relatively straightforward nature of the information to be obtained, a mail questionnaire would be the most efficient way to obtain information from physician's on their perception of a need for additional hospital space in the Syracuse metropolitan area.

C. BIAS AND REMEDY:
Doctors who most strongly feel there is a need for more beds will be more likely to return the survey, over-representing their opinions in the results. Therefore, telephone follow-ups will be made to those doctors who do not return the survey, to get their responses.

EXERCISE 5.3
Decide on a Method of Contact

(A) INDICATE WHICH OF THE THREE METHODS OF CONTACT YOU WOULD USE, (B) JUSTIFY YOUR SELECTION, AND (C) IDENTIFY ONE OR MORE SOURCES OF BIAS FROM YOUR METHOD OF CONTACT AND WHAT REMEDIES YOU WOULD TAKE.

A. METHOD:

B. WHY:

C. BIAS AND REMEDY:

STEP 5.4: Decide on the Questions

After determining the method of gathering information, the researcher must decide if the survey will contain questions that are closed-choice responses, open-ended responses, or some combination of the two.

CLOSED-CHOICE RESPONSES

As the name implies, this type of question limits the kinds of answers the subject gives, requiring a choice of one or more of the answers provided by the questionnaire. The following is an example of a closed-choice question:

> There has been a great deal of concern about the rising cost of food. How do you handle the problem of rising food costs? (Check all that apply).
>
> _____ purchase cheaper types of food
>
> _____ substitute other types of food in your daily diet
>
> _____ purchase large amounts of an item which is on sale
>
> _____ eat at restaurants less often
>
> _____ invite fewer people over to eat a meal at your home
>
> _____ don't know

An example of a closed-choice scale for opinions about a proposed policy is as follows:

___STRONGLY FAVOR ___FAVOR ___NEUTRAL ___OPPOSED ___STRONGLY OPPOSED

Still another example is this scale for obtaining information about the frequency of some activity, such as making use of a government service in order to determine the need for its expansion or reduction:

___AT LEAST ONCE A WEEK

___LESS THAN ONCE A WEEK, BUT AT LEAST ONCE A MONTH

___LESS THAN ONCE A MONTH

___NEVER

The major advantage of closed-response questions is that the answers given by the subjects are comparable and limited in number. This in turn makes coding and analyzing the data much easier. In addition, this type of question requires less skill and effort on the part of the interviewer, and is easier for the subject to answer. The most serious drawback is that the closed-response question may put words in the subjects' mouths by supplying answers they may not have thought of themselves. Most subjects do not want to admit that they have not heard of an issue and they can conceal this fact by choosing one of the answers provided.

OPEN-ENDED RESPONSES

Open-ended response questions are those that allow subjects to answer the questions in whichever manner they see fit without restrictions imposed by the questionnaire's designer. At the same time, the responses are extremely difficult to classify. Open-ended questions, therefore, should only be used when they are clearly appropriate. An appropriate example of an open-ended question is: "What do you think are the main causes for the rising price of food?"

The most important advantage of the open-ended response question is that the respondents can answer using their own reasoning and thinking patterns. Another advantage is that open-ended responses do not produce answers where none exist, which may be a problem with closed-response questions. Finally, this type of question can provide a chance for subjects to "warm up" at the beginning of the interview.

The major limitation to this type of response question lies in the difficulty of making meaningful comparisons among subjects. Another problem is that interviewers will be variously skilled in recording verbatim responses that in turn will bias the results of the survey. Finally, analyzing the open-ended responses is more time consuming than closed-choice responses. Whenever you decide to include open-ended questions you must also include the specific procedures for coding the answers. So that you can make generalizations about the responses.

Survey questions are a source of bias. Things like wording, question order, and limited choice of answers can all influence the respondents' replies. For example, consider the question:

"How much do you support clean air?"

___Slightly ___Moderately ___ Strongly

The question introduces bias in two ways: (1) It ignores the aspect of cost or priorities such as higher taxes or clean air vs. higher fuel costs, (2) The choices given allow only positive responses excluding neutrality or opposition. A better question would be:

"How much money should the government spend on improving air quality?

___ Less than at present ___ The same as now

___ More than at present

EXAMPLE FOR EXERCISE 5.4
Decide on the Questions

PROVIDE THREE EXAMPLES OF QUESTIONS TO BE USED IN THE SURVEY, INCLUDING THE RESPONSE CATEGORIES FOR CLOSED-CHOICE QUESTIONS. IF YOU USE OPEN-ENDED QUESTIONS, INDICATE WHY, AND INDICATE WHAT CATEGORIES WILL BE USED TO CODE THE ANSWERS.

QUESTION 1:
How important is each of the following as the cause of having patients admitted to an area hospital?

	Main Reason	Frequent Reason	Rare Reason	Never
Elective Surgery	________	________	________	________
Emergency trauma	________	________	________	________
Long-term care	________	________	________	________
Family-care	________	________	________	________
Other:________ (Please indicate)	________	________	________	________

QUESTION 2:
How often do you have difficulty getting patients admitted for non-elective surgery or other treatment to each hospital that you use:

	Always	Usually	Rarely	Never
Community General	________	________	________	________
Crouse-Irving	________	________	________	________
(Each area hospital will be listed.)				

QUESTION 3:
What do you think is the main need to improve medical services in this area?

This open-ended question will be used because I want to see if hospital expansion, or some other action, is volunteered as being considered most important by the doctors in the area. No closed-choices will be used for this question since I wish to obtain the undirected responses of the doctors on this issue. The answers will be classified into the following categories: (1) Answers that indicate the need for more hospital beds; (2) Answers that indicate the need for other types of services (which will be listed, in order of frequency).

EXERCISE 5.4
Decide on the Questions

PROVIDE THREE EXAMPLES OF QUESTIONS TO BE USED IN THE SURVEY, INCLUDING THE RESPONSE CATEGORIES FOR CLOSED-CHOICE QUESTIONS. IF YOU USE OPEN-ENDED QUESTIONS, INDICATE WHY, AND INDICATE WHAT CATEGORIES WILL BE USED TO CODE THE ANSWERS.

QUESTION 1:

QUESTION 2:

QUESTION 3:

STEP 5.5: Estimate the Costs of a Survey or Interview

It is important to keep in mind that surveys and interviews are costly and that one always has to weigh the costs of the research with the expected benefits that the information will provide. You should never assume that time spent in doing a survey is free. Although specifying exact costs is very difficult until you have had extensive experience in conducting surveys and interviews, one should be aware of immediate costs. The following costs should be considered:

1. Design time--how long does the survey design take to complete? Refer to Steps 5.1 - 5.4 on the preceding pages.
2. Printing costs
3. Transportation costs--how much does it cost to get to respondents for face-to-face interviews?
4. Communication costs--how much does the use of the telephone or mail cost?
5. Analyzing the information--how much time does it take to count the responses or to put the responses on a compute and run the computer program?
6. Report preparation costs--how much time does it take to prepare the report?

EXAMPLE FOR EXERCISE 5.5
Estimate the Costs of a Survey or Interview

FOR THE SURVEY YOU HAVE BEEN DESIGNING, ESTIMATE THE COSTS USING THE CATEGORIES PROVIDED BELOW.

SURVEY COST ESTIMATE WORKSHEET

	NUMBER OF HOURS	X	FEE PER HOUR	=	LABOR	+	OTHER COST	=	TOTAL	COMMENTS
1. DESIGN TIME	10	X	$50	=	$500	+	$ 0	=	$ 500	Professional survey researcher completes this task with clients.
2. PRINTING COSTS	5	X	$10	=	$ 50	+	$100	=	$ 150	"Other" includes page and printing, which are high because this is a mail survey to an elite sample.
3. TRANSPORTATION COSTS		X		=		+		=		None because of mail survey.
4. MAIL	2	X	$ 5	=	$ 10	+	$220	=	$ 225	$220 is $.22 times 1,000.
5. ANALYSIS COSTS	10	X	$ 7	=	$ 70	+	$100	=	$ 170	First line is data input and computer costs.
	10	X	$50	=	$ 500					Second line is professional analyst's time.
6. REPORT PREP.	20	X	$50	=	$1000	+	$250	=	$1,150	Professional analyst's time to write the report. $150 for typing and reproduction of 10 copies.

EXERCISE 5.5
Estimate the Costs of a Survey or Interview

FOR THE SURVEY YOU HAVE BEEN DESIGNING, ESTIMATE THE COSTS USING THE CATEGORIES PROVIDED BELOW.

SURVEY COST ESTIMATE WORKSHEET

	NUMBER OF HOURS	X	FEE PER HOUR	=	LABOR	+	OTHER COST	=	TOTAL	COMMENTS
1. DESIGN TIME		X		=		+		=		
2. PRINTING COSTS		X		=		+		=		
3. TRANSPORTATION COSTS		X		=		+		=		
4. MAIL		X		=		+		=		
5. ANALYSIS COSTS		X		=		+		=		
6. REPORT PREP.		X		=		+		=		

SUMMARY

We have just introduced the basic steps you need to follow in order to gather information on public policy issues through surveys and interviews. The range of topics and target populations are unlimited, but the quality of information that you will acquire depends upon your carefully completing the steps outlined in this chapter. Although information generated through surveys is always open to question, it frequently represents the only source of information available to the public policy analyst. In addition, we have pointed out the importance of minimizing bias from the following sources: (1) interests of the client, (2) sampling procedures, (3) method of contact, and (4) construction of survey questions.

TABLE 5.1 REVIEW

CONCEPT	DEFINITION	TASK	EXAMPLE
Target Population	Group of people to which the survey applies	Identify precisely the people by location, role, and other important characteristics	All individuals in the N.J. who are potential workers
Sample	Portion of the target population which is actually surveyed	Develop procedures for selecting from the target population the most representative sample	Stratified random sample
Closed-Choice Responses	Type of question in which respondent has a limited number of alternatives	Prepare a precise and clearly stated question with a small number of discrete answers	Do you have a full-time job? Yes or No
Open-Ended Responses	Type of question in which respondent can answer in his or her own words	Prepare a clearly stated question and codes for expected answers	"What is the reason for your unemployment (Code for whether blame is placed on government, society, education, or self.)
Survey Bias	Factors in the design and implementation of the survey that fail to give an accurate picture	Identify sources of bias in the sampling procedure, the questions, the method of contact or others	Telephone surveys fail to represent views of people without phones or with unlisted numbers

PART THREE: STATISTICAL ANALYSIS SKILLS

The purpose of this section of the manual is to introduce you to the basic methods of data presentation and analysis that can be used in the study of public policy issues. The section is written with the assumption that you have had no previous courses in statistical analysis.

Chapter 6: Descriptive Statistics: Organizing, Displaying and Interpreting Data

Step 1: Interpret Numerical Data

Step 2: Use Tables

Step 3: Use Bar Graphs

Step 4: Use Trend Lines

Step 5: Use Pie Charts

Step 6: Use Percentages to Describe Differences

Step 7: Use the Mean

Step 8: Use Scatterplots and Pearson's r

CHAPTER 6

DESCRIPTIVE STATISTICS: ORGANIZING, DISPLAYING, AND INTERPRETING DATA

This chapter introduces the use of statistics in the analysis of public policy issues.

OBJECTIVE

After reading this chapter you should be able to present quantitative information to describe conditions relevant to public policy, and to interpret such information. The techniques of presentation include bar graphs, tables, trend lines, pie charts, percentages, means, scatterplots, and Pearson's r.

INTRODUCTION

Like it or not, the making and analyzing of policy are increasingly dependent on the presentation of statistical evidence. We use numbers in almost every aspect of communication, from a description of our favorite sports team as "Number 1," to the movie called "10" about a man's quest for what he considered the perfect woman. Despite this spread of numbers throughout our culture, people are often resistant to the careful use of numbers in the analysis of policy. But numbers are just another way of communicating. Once you learn the basics of the "grammar" of numerical presentation, you will find that with numbers you can present many ideas more concisely than with words.

People collect and interpret numerical data when they analyze public issues for two primary reasons:

1. Numbers help us to acquire a general grasp of factors affecting public policy issues;

2. Numbers give us a precise statement about those factors so that easy comparisons can be made between different locations and periods of times.

To illustrate, no one involved with analyzing policy should be content with a statement like: "lots of people are unemployed." Still less people should be satisfied with "lots more people are unemployed this year than last year." A statement like "unemployment in the United States is 9.6% this year, compared to 8.4% last year" is clearly preferable. It gives us a general picture of social conditions and gives us a precise measure so that we see that unemployment is worse this year than last.

Numbers can be used in all areas of public policy analysis, but they are most extensively used to measure social conditions. Table 6.1 presents examples of data that might be found in each of the three components of public policy issues described in Chapter 1.

TABLE 6.1: Sources of Numerical Data Used to Describe the Components of Public Policy Issues

SOCIAL CONDITIONS	PLAYERS	PUBLIC POLICIES
● Unemployment, inflation, economic growth, health, traffic fatalities, drug use, educational statistics	● Surveys of attitudes of of members of constituencies of players ● Legislative voting records	● Government expenditures ● Tax rates ● Tax revenues ● Budget Deficits

Although numerical data on players and public policies can be found, it is relatively limited. However, thousands of different statistics can be used to measure social conditions.

Numerical data can be displayed and statistically analyzed in several ways. The purpose of this chapter is to introduce the most basic forms. Each of the remaining steps in the chapter provides an introduction to their use. Before moving on to those steps, we need to say something about interpreting numerical data.

STEP 6.1: Interpret Numerical Data

Interpreting numerical information means either explaining the reasons behind the information, or drawing an inference about what the information means for the public policy issue. More specifically, interpretation is performing one or more of the following types of analysis (as we discussed in Chapter 3) with numerical information:

1. Explaining why the numbers are the way they are;
2. Forecasting what the numbers might look like in the future;
3. Evaluating whether the numbers are good or bad given a clear set of policy goals;
4. Prescribing a public policy based on the numbers and conclusions drawn from the explanation, forecast, and evaluation.

A good interpretation of numerical information should include the following criteria:

1. The information should be displayed and statistically analyzed in the most appropriate way (which we will discuss the remainder of this chapter).

2. The interpretation should begin with a brief summary of the main point or points of the display or statistical analysis. (Note, however, that a simple verbal summary of the numerical information, with nothing else does not constitute interpretation.)

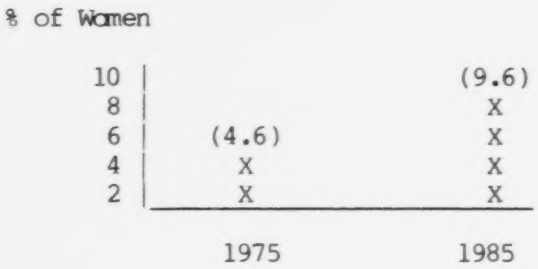
3. An explanation of at least one of the major factors contributing to numbers should be provided.

4. One or more of the following should then be provided:

   - Forecast
   - Evaluation
   - Prescription

It is often the case that a particular display will generate many different, even conflicting, interpretations. Consider the bar graph below. In Exercise 6.1 this bar graph is interpreted. Note that the interpretation provides a brief summary of one main point, one possible explanation, a forecast, an evaluation, and a prescription. You could read the same bar graph and come up with a different interpretation. You are asked to do this in Exercise 6.1. The example is deliberately simplistic and sexist so it will be easier for you to write a better one.

Figure 6.1: Percent of Women in the United States Armed Forces, 1975 and 1985



Source: Department of Defense Report, published in USA Today, June 11, 1985, p. 1.

EXAMPLE FOR EXERCISE 6.1
Interpret Numerical Data

PROVIDE AN INTERPRETATION OF FIGURE 6.1. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED IN THE FIGURE AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE ONE EXAMPLE OF A FORECAST, EVALUATION, AND A PRESCRIPTION RELATED TO WHAT IS PORTRAYED IN THE FIGURE. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

A major point of the Figure is that there are fewer women in the armed forces than men. One explanation for this is that women don't like to fight as much as men. My forecast is that since the numbers are so low, there will probably never be nearly as many women as men in the armed forces. My evaluation is that this is probably a good thing, since women are better prepared to do things like keep house rather than fight wars. My prescription is that whatever policies the military now follows about allowing women in the armed forces should be continued, since it has the effect of not letting may women into the armed forces.

EXERCISE 6.1
Interpret Numerical Data

PROVIDE AN INTERPRETATION OF FIGURE 6.1. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED IN THE FIGURE AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE ONE EXAMPLE OF A FORECAST, AN EVALUATION, AND A PRESCRIPTION RELATED TO WHAT IS PORTRAYED IN THE FIGURE. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

STEP 6.2: Use Tables

Data must be presented in a form that is both interesting and clear. Stringing numbers together in a text does not accomplish either of these goals. For example, consider the following hypothetical example:

> A recent study by the organization called "Committee for the Aging: Research and Education" (CARE), indicates that in 1920 the percentage of the United States population over 60 years of age and over was 6% of the population; in 1940 the percentage was 8%; in 1960 it was 13%; in 1980 it was 15%; and in 2000 it is forecast to be 20%.

Such information is difficult to understand presented in this way. If arranged in a tabular form, as below, it is much easier to read.

TABLE 6.2: Percentage of the United States Population at Least 60 Years of Age

YEAR	PERCENTAGE
1920	6%
1940	8%
1960	13%
1980	15%
2000 (forecast)	20%

(Source: Committee for Aging: Research and Education, 1985)

From this table, it is easy to see clear trends in the variable (a characteristic which may take on different values) over the time series (the pattern of a series of values arranged in a time sequence).

Tabular methods are a widely used accepted means of organizing small sets of data for rapid visualization and understanding. A table requires:

- A title which clearly explains its nature
- Data elements carefully listed under headings which clearly specify units of measure
- Documentation of the data source

Tables can be used to present information that describes social conditions. They are most useful when numerical information is presented either for years as in the table above or for different locations (e.g., different cities or states or countries).

EXAMPLE FOR EXERCISE 6.2
Use Tables

A. CONSTRUCT A TABLE RELEVANT TO A PUBLIC POLICY ISSUE.

The States with the Highest Increase in Child Molestation (1984)

	STATE	INCREASE IN CASES
1.	Mississippi	126%
2.	Nebraska	121%
3.	Missouri	100%
4.	Oregon	83%
5.	Wisconsin	82%

Source: "Reports of Child Molestation Increase by 35%, Study Finds," New York Times, 2/18/85, p. A24.

B. WRITE AN INTERPRETATION BELOW. CONTINUE ON ANOTHER PAGE IF NECESSARY. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

The main point of the figures is the sharp increase in the number of cases of the crime of child molestation. The explanation is not necessarily an increase in actual child abuse; it may only reflect an increase in the rate of cases reported. In either case, it leads to an evaluation that child molestation is a growing problem calling for government action. At least, it supports two prescriptions: (1) There is a need for increasing aid from all levels of government to programs to assist abused children. (2) It is also shows the need for legislators to seek tougher penalties against child molesters.

EXERCISE 6.2
Use Tables

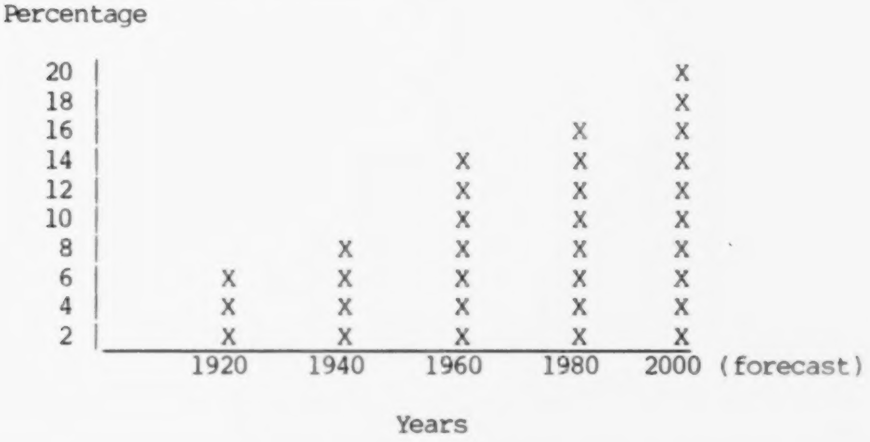
A. CONSTRUCT A TABLE RELEVANT TO A PUBLIC POLICY ISSUE.

B. WRITE AN INTERPRETATION BELOW. CONTINUE ON ANOTHER PAGE IF NECESSARY. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

STEP 6.3: Use Bar Graphs

An even more striking way of presenting data is to use a bar graph, which is a series of parallel bars (or similar markings) placed either vertically or horizontally to indicate frequencies. Figure 6.2 is an example of the same information about the population of the United States presented in bar graph form.

Figure 6.2: Bar Graph Showing the Percentage of the United States Population at Least 60 Years of Age

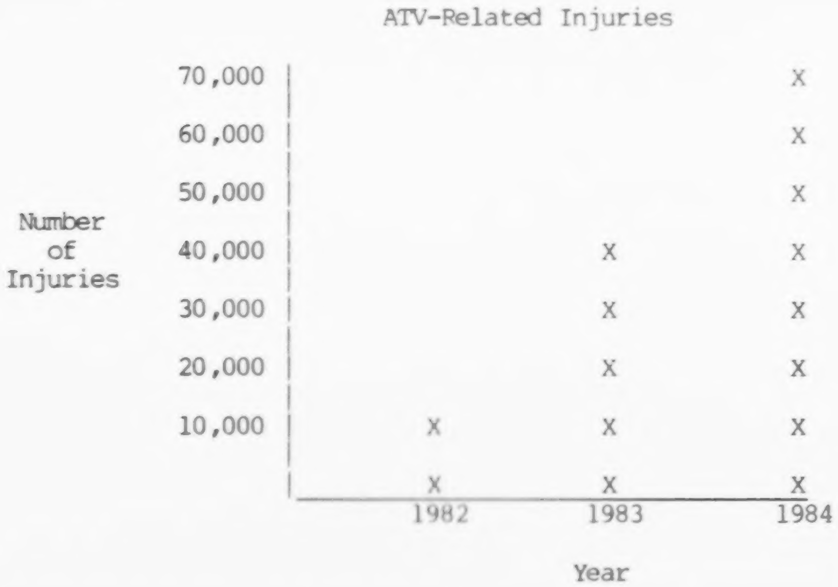


Source: Committee for the Aging: Research and Education, 1985.

In the construction of a bar graph, the length of the bars and the space between them should be consistent and allow for clear visual inspection. In the example, above each "X" represents about 2 percentage points. Each bar does not necessarily represent each number precisely, but it gives a general picture of the pattern. Bar graphs are useful for helping the reader see the differences and similarities between observational units such as years in the example above, or such as sex (comparing males to females), cities, states, countries, types of businesses, groups of people, geographical locations (e.g., north versus south, or urban versus rural). Anytime you want to compare two or more units on some variables, you may want to use a bar graph.

EXAMPLE FOR EXERCISE 6.3
Use Bar Graphs

A. CONSTRUCT A BAR GRAPH RELEVANT TO A PUBLIC POLICY ISSUE. YOUR GRAPH MUST HAVE AT LEAST TWO BARS.


ATV-Related Injuries

Source: National Safety Council, Deaths From ATV Vehicles.

B. WRITE AN INTERPRETATION BELOW. CONTINUE ON ANOTHER PAGE IF NECESSARY. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

The main point is that there has been an increase in the number of injuries on 3-wheel "ATV" vehicles during the past two years. This increase can be explained by the growing popularity of these vehicles and a lack of government regulations on them. In order to reduce the very high injury rate, we prescribe laws comparable to those which exist for cars, motorcycles, and mopeds to regulate the of ATVs.

EXERCISE 6.3
Use Bar Graphs

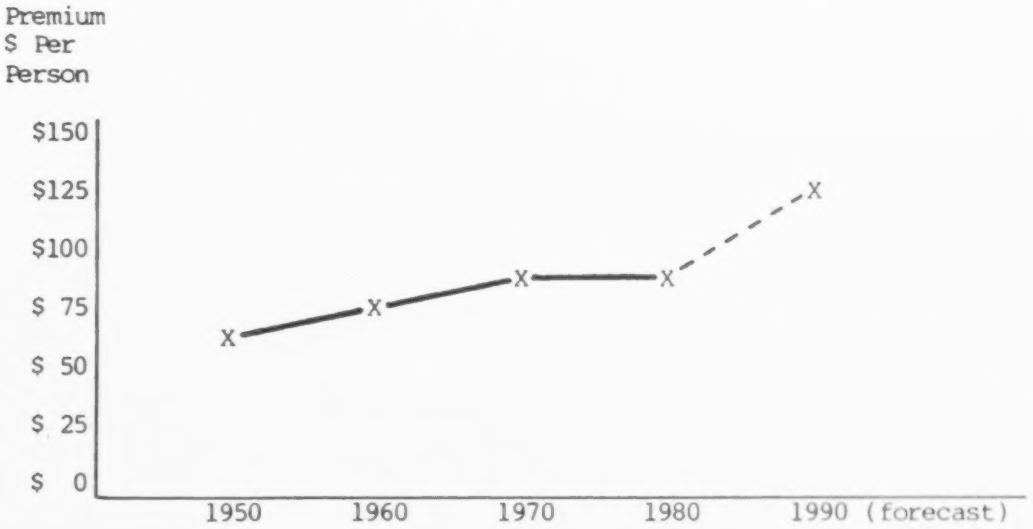
A. CONSTRUCT A BAR GRAPH RELEVANT TO A PUBLIC POLICY ISSUE. YOUR GRAPHS MUST HAVE AT LEAST TWO BARS.

B. WRITE AN INTERPRETATION BELOW. CONTINUE ON ANOTHER PAGE IF NECESSARY. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

STEP 6.4: Use Trend Lines

A trend line is a common form of graph. The trend line is derived by plotting time in years, months, or days on the x-axis, and something which is changing over time on the y-axis. This type of graph shows the progress of that which is on the y-axis over time. The trend can also be projected into the future. Note that in the figure below the forecast figure is indicated with a dotted line. This type of display is useful in monitoring and forecasting social conditions. Figure 6.3 is an example of a trend line using hypothetical data.

Figure 6.3: Trend Line Showing Health Insurance Premiums in New York State

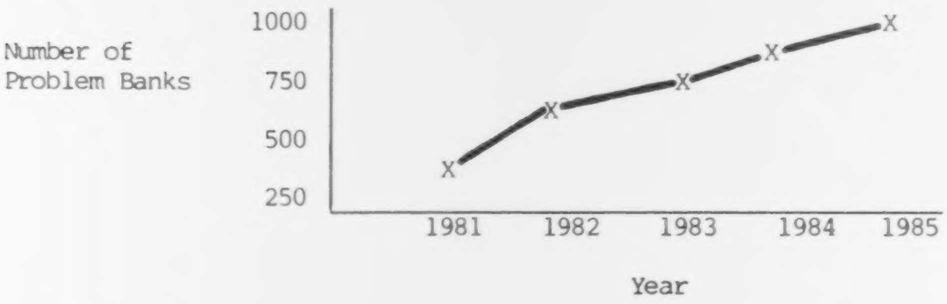


Source: "Trends in Insurance Premiums," 1982.

EXAMPLE FOR EXERCISE 6.4
Use Trend Lines

A. CONSTRUCT A TREND LINE GRAPH RELEVANT TO A PUBLIC POLICY ISSUE. YOUR GRAPH MUST HAVE A MINIMUM OF FIVE DATA POINTS.

Number of Problem Banks, 1981-85



Source: Federal Reserve Board, Regulation Activities, 1981-1985.

B. WRITE AN INTERPRETATION BELOW. CONTINUE ON ANOTHER PAGE IF NECESSARY. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

The main point of the graph is that the number of banks which are viewed as "problem banks," i.e., those that could be in financial trouble, has grown substantially. The reason is that many of these banks are small, and they have been hit hard by the high rate of foreclosure and delinquency on loans. The forecast is that if this continues, the effect on the economy of widespread bank failures would be devastating. Prescription: The FDIC and the Federal Reserve must continue to assist these banks, however possible, in order to prevent their failure. The Federal Government need to pass legislation, such as the Farm Credit Act, to reduce the amount of loan delinquency and foreclosures.

EXERCISE 6.4
Use Trend Lines

A. CONSTRUCT A TREND LINE GRAPH RELEVANT TO A PUBLIC POLICY ISSUE. YOUR GRAPH MUST HAVE A MINIMUM OF FIVE DATA POINTS.

B. WRITE AN INTERPRETATION BELOW. CONTINUE ON ANOTHER PAGE IF NECESSARY. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

STEP 6.5: Use Pie Charts

A pie chart can also be used to show how the component parts of a sum are divided. The apportionment of government spending or the ethnic composition of a political party are both examples of subjects amenable to this technique. A pie chart is not difficult to construct if you remember that the total of 100% is described by a circle of 360°. Thus, each percentage is equal to an arc of 3.6°. To illustrate, we will construct a pie chart to show the distribution of people over 60 years of age by age group as outlined in Table 6.3.

TABLE 6.3: Age Distribution of Population over 60

AGE GROUP	PERCENT
60-64 years	29.7
65-74 years	43.6
75-84 years	21.1
85 years & over	5.6
	100.0%

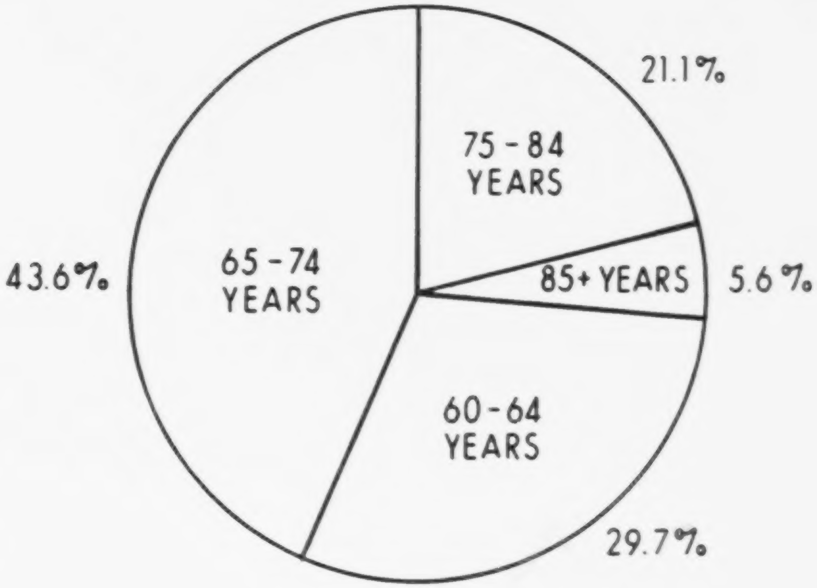
If each percent figure in Table 6.3 is multiplied by 3.6°, we will know the size of the arc that must be drawn for each segment of the pie.

$$29.7 \times 3.6 = 106.92^\circ$$
$$43.6 \times 3.6 = 156.96^\circ$$
$$21.1 \times 3.6 = 75.96^\circ$$
$$5.6 \times 3.6 = 20.16^\circ$$

A protractor should be used to measure the necessary angles on the circle. It is a good idea to plan ahead so that you have your narrowest angles at the sides where they will be the easiest to label. The labels can either go inside or outside the circle (the latter treatment is preferable if the sections are especially narrow).

As illustrated in Figure 6.4, the pie chart can be a very effective technique for the visual display of data. However, some caution should be observed. Pie charts containing more than eight segments, or containing several segments with very small arcs (less than 5%), are difficult to label and often appear so cluttered as to be difficult to interpret. A pie chart (or any graph) which is difficult to interpret or confusing is of no assistance in analyzing data or in presenting the results of analysis.

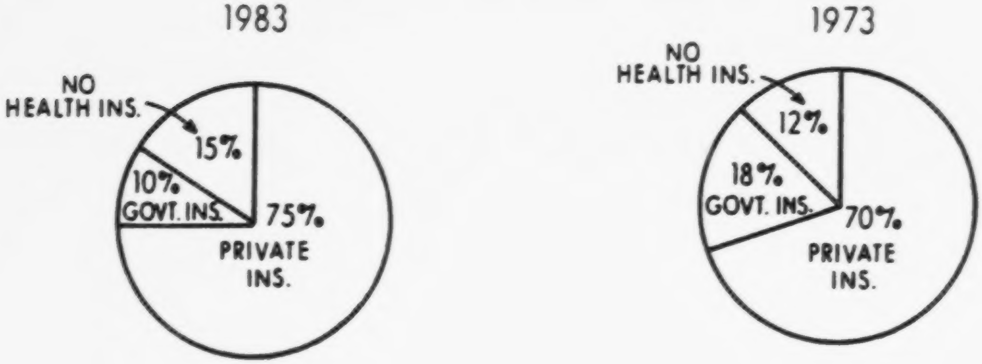
Figure 6.4: Pie Chart
Distribution of United States Population Age 60+



EXAMPLE FOR EXERCISE 6.5
Use Pie Charts

A. CONSTRUCT A PIE CHART WITH AT LEAST TWO PARTS AND PERCENTAGES EQUAL TO 100%.

Americans and Health Insurance



Source: Robert Pear, "15% of Americans Found to Lack Health Coverage," *New York Times*, 2/18/85, p. A12.

B. WRITE AN INTERPRETATION BELOW. CONTINUE ON ANOTHER PAGE IF NECESSARY. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

As the chart shows, three-fourths of Americans must depend on the private sector for health insurance. (Another 15% have no insurance coverage at all.) This is caused by the United States government's traditional reluctance to support health insurance. The evaluation of this as a social problem is: First, when people are laid off from their jobs, they lose medical benefits and are unlikely to be able to afford to get their own. Second, as the Reagan administration makes cuts in social programs, the number of people covered by health programs like medicare is reduced.

Prescription: In today's medical environment, where health care costs are very high, and hospitals are reluctant to admit people without health insurance, it is vital that Americans have insurance. Therefore, the government should avoid further cutbacks in medicare and should devise incentives for private insurers to offer low-cost health insurance to those who cannot afford it.

EXERCISE 6.5
Use Pie Charts

A. CONSTRUCT A PIE DIAGRAM WITH AT LEAST TWO PARTS AND PERCENTAGE EQUAL TO 100%.

B. WRITE AN INTERPRETATION BELOW. CONTINUE ON ANOTHER PAGE IF NECESSARY. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

STEP 6.6: Use Percentages to Describe Differences

Percentages can be a powerful tool in assessing differences between two sets of numbers. You may want to determine the differences between estimated and actual budget figures or between one year's crime rate and another. Calculating the percentage difference can give you a precise indicator of the difference between two points of observation.

For example, the original estimate of the Federal budget deficit for 1983 was $113.65 billion but the actual deficit was $195.4 billion. The percentage of error or difference between the estimate and the actual was 73%. The number of felonies in New York City was 637,451 in 1981 while the number dropped to 538,051 in 1984. The difference between the two years was a 16% drop.

To find the percentage difference you make the following calculation:

$$\frac{\text{New Figure - Original Figure}}{\text{Original Figure}} \text{ X } 100 = \text{\% difference}$$

For the example above: 538,051 - 637,451/637,451 = .16 or 16%

Using the percentage difference, you can see precisely the increase or decrease between years or between original and actual estimates. Such an analysis can help you tell whether things are getting better, worse, or staying the same.

EXAMPLE FOR EXERCISE 6.6
Use Percentages to Describe Differences

A. PRESENT A CALCULATION FOR A PERCENTAGE DIFFERENCE. IDENTIFY AND DOCUMENT THE DATA USED.

The number of people living in poverty in 1973 was 23 million and in 1983 was 35.3 million according to "Study Absolves Reagan in Poverty Increase," USA Today, June 11, 1985, p. 10.

$$\frac{35.3-23}{23} \times 100 = 53.4\%$$

B. WRITE AN INTERPRETATION OF THE PERCENTAGE DIFFERENCES BELOW. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

The main point is that the number of people living in poverty has increased by more than 50% over the past ten years. A major downturn in the economy between 1978 and 1983 is the prime explanation for the increase. The cutbacks in the welfare policy may have accelerated the trend. Whatever the reason, we can forecast a continued growth in poverty. If the economy is the major reason for the decline, policies stimulating economic revival is an obvious prescription to reverse it.

EXERCISE 6.6
Use Percentages to Describe Differences

A. PRESENT A CALCULATION FOR A PERCENTAGE DIFFERENCE. IDENTIFY AND DOCUMENT THE DATA USED.

B. WRITE AN INTERPRETATION OF THE PERCENTAGE DIFFERENCES BELOW. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

STEP 6.7: Use the Mean

The arithmetic mean or as it is commonly called, the "average," can be useful in describing social conditions and public policies. It can be used to summarize conditions over a number of years or across a number of points of observation.

For example, the mean budget deficit for a five year period from 1980 to 1984 was 119.74, but as Table 6.4 indicates, the low for that period was 57.9 and the high was 195.4.

TABLE 6.4: United States Federal Government Budget Deficit Between 1980 and 1984

YEAR	MEAN
1980	59.5
1981	57.9
1982	110.6
1983	194.5
1984	175.3
SUM	598.7 / 5 = 119.74

In addition to providing a summary of a series of observations, the mean can be useful in making judgments about improvements or lack of improvement in social conditions. For example, a budget deficit for one year following 1984 that was below the mean of 119.74 could be viewed as an improvement in narrowing the deficit. One important point about using the mean is the range of numbers that contribute to the mean. In the example above, the range is very large with 57.9 in 1981 and 195.4 in 1983. Taking into account the range, you can see that the mean is a very rough way of generalizing about the five year period. There are several other statistics that can be used to augment the interpretation of the mean including the median, mode and the standard deviation. However, for introductory purposes, we will not present these statistics here. The range of the numbers that go to make up any mean is a sufficient tool for introductory purposes.

An important point to make about the use of means is that just reporting the mean of a single set of observations is not very useful. It is much better to compare the means of two different sets of observations. For example, the $119.72 billion average deficit for the year 1980 to 1984 is hard to evaluate without some comparison. However, if we point out that the mean deficit between 1975 and 1979 was 46.6 billion, we immediately see how much the deficit on average has increased. The average between 1980 and 1984 is more than twice as high as the average between 1975 and 1979.

EXAMPLE FOR EXERCISE 6.7
Use the Mean

A. PROVIDE INFORMATION ON AT LEAST FIVE OBSERVATIONS. DISPLAY AND CALCULATE THE MEAN AS DESCRIBED IN THE TEXT.

Percentage decrease in the value of United States Farmland between 1975-1980 and 1981-1985.

YEAR	PCT. DECREASE	YEAR	PCT. DECREASE
1976	0%	1981	0
1977	1%	1982	1%
1978	0%	1983	6%
1979	2%	1984	1%
1980	1%	1985	12%
Mean Pct. Decrease	0.8%	Mean Pct. Decrease	4.0%

Source: U.S. Department of Agriculture, *Economic Report*, 1985.

B. WRITE AN INTERPRETATION OF THE MEAN. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

The main point of the table is that in more recent years the value of land in the United States has decreased much more sharply in percentage terms than in earlier years. The reason for this is that credit problems and high interest rates have forced many farmers to sell their land under duress, and they, therefore, receive a lower price. Because of this obvious problem, the government should consider implementing special mortgage rates or some sort of tax deductions for farmers to prevent the value of farmland from decreasing at such a rapid rate.

EXERCISE 6.7
Use the Mean

A. PROVIDE INFORMATION ON AT LEAST FIVE OBSERVATIONS. DISPLAY AND CALCULATE THE MEAN AS DESCRIBED IN THE TEXT.

B. WRITE AN INTERPRETATION OF THE MEAN. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AN EVALUATION, OR A PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOU PROVIDE.

STEP 6.8: Use Scatterplots and Pearson's r

A scatterplot, or scatter diagram, is a graph in which one variable is scaled along the Y (or vertical) axis and the other is scaled along the X (or horizontal) axis. Pairs of values can then be represented as points on the graph. The pattern or "scatter" which the points describe suggests types of association of the variables.

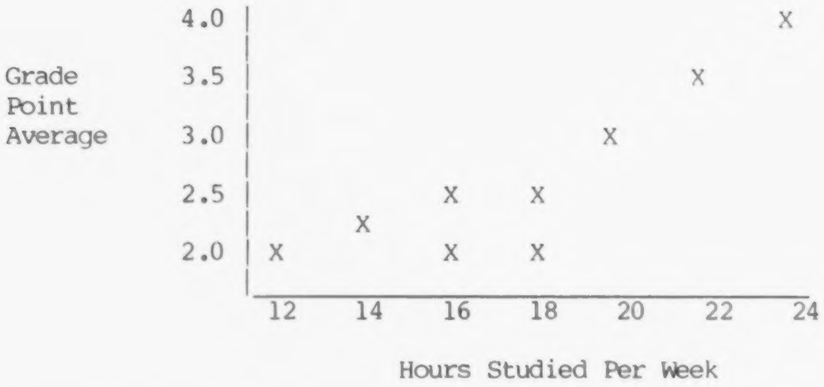
The following information indicates the amounts of hours studied per week for ten students and their respective grade point average on a scale of 0.00 to 4.00. We are interested in determining whether there is any association between the two variables. In other words, do more hours studied produce higher grades on the average?

TABLE 6.5: Hours Studied and Grade Point Average

STUDENT	HOURS STUDIED X	GRADE POINT AVERAGE Y
A	19	2.9
B	14	2.3
C	21	3.5
D	12	2.1
E	24	3.8
F	19	2.7
G	20	3.1
H	16	2.7
I	23	3.6
J	17	2.6

Using this data, we can construct a scatterplot:

Figure 6.5: Scatterplot of Hours Studied and Grade Point Average

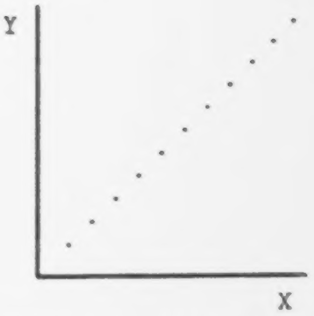


You will note that the points tend to line up from lower left to upper right. This tells us that "as hours studied increases, grade point average increases."

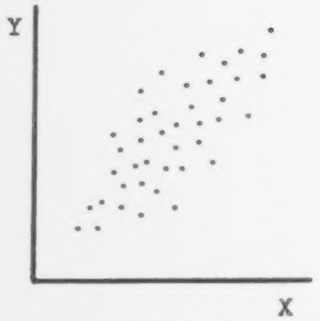
Figure 6.5 displays a positive association between two variables. This means that as one increases, so does the other. It is also possible to encounter negative relationships for variables. This means that as one increases, the other decreases. An example of a negative relationship is the average wealth of a neighborhood and the amount of crime in the neighborhood. The higher the wealth, the lower the crime, in general. In some situations, there may be no relationship between variables. In a social program that does not work, for example, the more money spent on the program is unrelated to the improvement in social conditions. In general, money spent on programs to rehabilitate criminals does not lead necessarily to lower crime rates.

Figure 6.6 presents seven hypothetical patterns of data on scatterplots. One of these seven will develop for any scatterplot that is developed. To make an interpretation you need to make a judgment about the pattern of data to determine whether there is a relationship and if so in what direction. Formal statistical calculations can be applied to determine a precise mathematical representation of the pattern of data, but making a judgment is a first step. Once you have done that you will need to calculate a Pearson's r. A Pearson's r is a statistical calculation to give you a number between +1.0 and -1.0 that indicates the relationship between two variables on a scatterplot. A Pearson's r close to +1.0 is a strong positive correlation. One close to -1.0 is a strong negative correlation, and one near 0.0, whether positive or negative, shows no correlation.

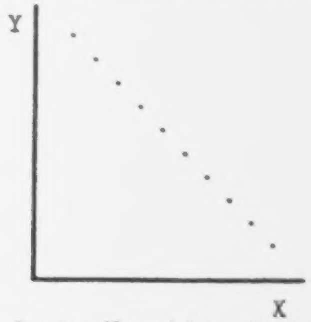
Figure 6.6: Scatterplots



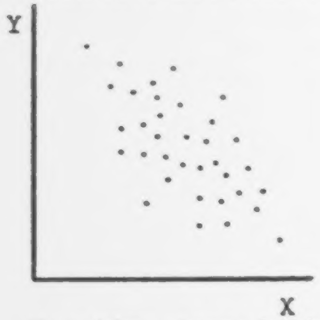
Perfect, Positive Association



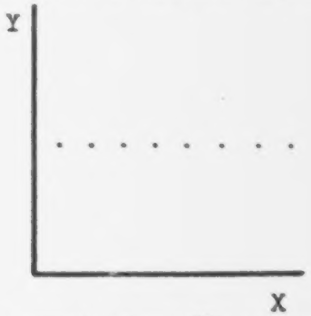
Positive Association



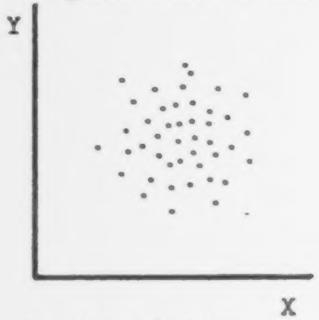
Perfect, Negative Association



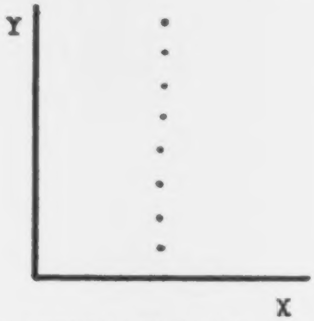
Negative Association



No Association (Because the Y variable does not vary)



No Association



No Association (Because the X variable does not vary)

PEARSON'S r — THE PEARSON PRODUCT MOMENT CORRELATION COEFFICIENT

Pearson's r is a correlation statistic, appropriate to interval and ratio scale data. It varies from -1.0 to +1.0. It is possible to express Pearson's r in a form which is easy to calculate:

$$r = \frac{\sum XY - \frac{(\sum X)(\sum Y)}{n}}{\sqrt{\left[\sum X^2 - \frac{(\sum X)^2}{n}\right]\left[\sum Y^2 - \frac{(\sum Y)^2}{n}\right]}}$$

where:

r = Pearson's r

n = the number of paired observations being tested for association,

X and Y = the paired variables, and each summation is for the 1st through nth term.

Using this formula, the calculation of r for the test score/grade point average data is as follows: See Table 6.6.

TABLE 6.6: WORKSHEET FOR PEARSON'S r — HOURS STUDIED/GPA DATA

CASE	X	Y	X^2	Y^2	XY
A	2.9	19	8.41	361	55.1
B	2.3	14	5.29	196	32.2
C	3.5	21	12.25	441	73.5
D	2.1	12	4.41	144	25.2
E	3.8	24	14.44	576	91.2
F	2.7	19	7.29	361	51.3
G	3.1	20	9.61	400	62.0
H	2.7	16	7.29	256	43.2
I	3.6	23	12.96	529	82.8
J	2.6	17	6.76	289	44.2
SUM OF:	$X=29.3$	$Y=185$	$X^2=88.71$	$Y^2=3553$	$XY=560.7$

$$r = \frac{560.7 - \dfrac{(29.3)(185)}{10}}{\sqrt{\left[88.71 - \dfrac{(29.3)^2}{10}\right]\left[3553 - \dfrac{(185)^2}{10}\right]}}$$

$$= \frac{560.7 - 542.1}{\sqrt{(88.71 - 85.85)(3553 - 3422.5)}}$$

$$= \frac{18.6}{\sqrt{(2.86)(130.5)}}$$

$$= \frac{18.6}{\sqrt{373.23}}$$

$$= \frac{18.6}{19.3}$$

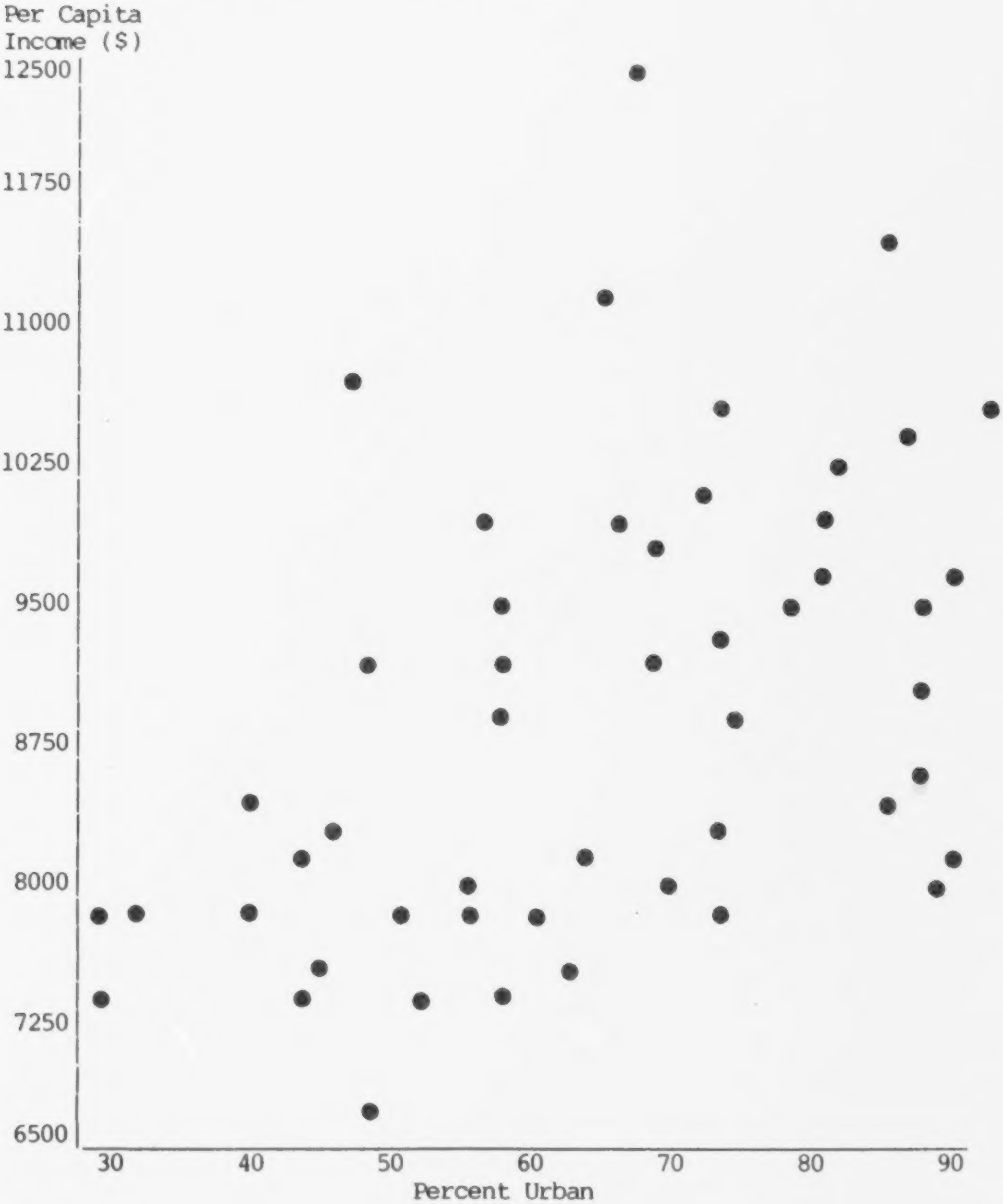
$$= .964$$

EXAMPLE FOR EXERCISE 6.8

Use Scatterplot and Pearson's r

A. FIND AT LEAST 10 CASES OF TWO INTERVAL VARIABLES. ILLUSTRATE THE RELATIONSHIP BETWEEN THE TWO WITH A SCATTERPLOT. LABEL THE SCATTERPLOT CLEARLY.

Percent Urban vs. Per Capita Income for the 50 States



EXAMPLE FOR EXERCISE 6.8, continued

B. CALCULATE PEARSON'S r. SHOW YOUR CALCULATIONS. USE THE REVERSE SIDE IF NECESSARY.

CASE	X	Y	X^2	Y^2	XY
	URB %	INCOME			
Alabama	60.7	7484	3684	56010256	454279
Alaska	64.3	12406	4134	153908836	797706
Arizona	83.8	8649	7022	74805201	724786
Arkansas	51.6	7180	2663	51552400	370488
California	91.3	10856	8336	117852736	991153
Colorado	80.6	9964	6496	99281296	803098
Connecticut	78.8	11445	6209	130988025	901866
Delaware	70.6	10195	4984	103938025	719767
Florida	84.3	8987	7106	80766169	757604
Georgia	62.4	8000	3894	64000000	499200
Hawaii	86.5	9787	7482	95785369	846576
Idaho	54.0	8126	2916	66031876	438804
Illinois	83.3	10658	6939	113592964	887811
Indiana	64.2	9978	4122	99560484	640588
Iowa	58.6	9178	3434	84235684	537831
Kansas	66.7	9958	4449	99161764	664199
Kentucky	50.9	7718	2591	59567524	392846
Louisiana	68.6	8282	4706	68591524	568145
Maine	47.5	7734	2256	59814756	367365
Maryland	80.3	10322	6448	106543684	828857
Massachusetts	83.8	9992	7022	99840064	837330
Michigan	70.7	9847	4998	96963409	696183
Minnesota	66.9	9519	4476	90611361	636821
Mississippi	47.3	6508	2237	42354064	307828
Missouri	68.1	8846	4638	78251716	602413
Montana	52.9	8445	2798	71318025	446741
Nebraska	62.9	8914	3956	79459396	560691
Nevada	85.3	10458	7276	109369764	892067
New Hampshire	52.2	8980	2725	80640400	468756
New Jersey	89.0	10755	7921	115670025	957195
New Mexico	72.1	7956	5198	63297936	573628
New York	84.6	10143	7157	102880449	858098
North Carolina	48.0	7852	2304	61653904	376896
North Dakota	48.8	8556	2381	73205136	417533
Ohio	73.3	9398	5373	88322404	688873
Oklahoma	67.3	9018	4529	81324324	606911
Oregon	67.9	9400	4610	88360000	638260
Pennsylvania	69.3	9294	4802	86378436	644074
Rhode Island	87.0	9250	7569	85562500	804750
South Carolina	54.1	7519	2927	56535361	406778
South Dakota	46.4	7452	2153	55532304	345773
Tennessee	60.4	7786	3648	60621796	470274
Texas	79.6	9513	6336	90497169	757235
Utah	84.4	7485	7123	56025225	631734
Vermont	33.8	7839	1142	61449921	264958
Virginia	66.0	9435	4356	89019225	622710
Washington	73.5	10363	5402	107391769	761681
West Virginia	36.2	7831	1310	61324561	283482
Wisconsin	64.2	9254	4122	85636516	594107
Wyoming	62.7	10692	3931	114318864	670388
SUMS	3348	455207	234298	4219804597	31017135

PEARSON'S r:

$$r = \frac{31{,}017{,}135 - \dfrac{(3348)(455{,}207)}{50}}{\sqrt{\left(234298 - \dfrac{(3348)^2}{50}\right)\left(4219804597 - \dfrac{(455207)^2}{50}\right)}}$$

$$r = \frac{539205}{\sqrt{(10156)\ (75536340)}}$$

$$r = \frac{539205}{875856} = .62$$

EXAMPLE FOR EXERCISE 6.8, continued

C. WRITE AN INTERPRETATION OF THE SCATTERPLOT AND THE PEARSON'S r. USE THE PATTERN IN THE PLOT AND THE VALUE OF PEARSON'S r IN THE INTERPRETATION. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AND EVALUATION, OR PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOUR PROVIDE.

The main point about the 50 states shown by the upward slope of the points in the scatterplot is the positive relationship between the percentage of urban (as opposed to rural) residents and average income. The Pearson's r of .62 indicators that this relationship is relatively strong. Several things may go to explain this relationship. One main reason is the problems that farmers have in maintaining a level of income comparable to city dwellers. This gives strong support to the numerous complaints and protests of farmers about their low incomes relative to the rest of society. Since American society is based in part on the goal of equality, the evaluation of this pattern of inequality is that farmers are being treated unfairly by the American economic system.

EXERCISE 6.8
Use Scatterplots and Pearson's r

A. FIND AT LEAST 10 CASES OF TWO INTERVAL VARIABLES. ILLUSTRATE THE RELATIONSHIP BETWEEN THE TWO WITH A SCATTERPLOT. LABEL THE SCATTERPLOT CLEARLY.

EXERCISE 6.8, continued

B. CALCULATE PEARSON'S r. SHOW YOUR CALCULATIONS. USE THE REVERSE SIDE IF NECESSARY.

CASE	X	Y	X^2	Y^2	XY

PEARSON'S r:

EXERCISE 6.8

C. WRITE AN INTERPRETATION OF THE SCATTERPLOT AND THE PEARSON'S r. USE THE PATTERN IN THE PLOT AND THE VALUE OF PEARSON'S r IN THE INTERPRETATION. BRIEFLY SUMMARIZE A MAJOR POINT PORTRAYED AND PROVIDE AN EXPLANATION. IN ADDITION, PROVIDE AN EXAMPLE OF ONE OF THE FOLLOWING: A FORECAST, AND EVALUATION, OR PRESCRIPTION RELATED TO WHAT IS PORTRAYED. CLEARLY LABEL EACH TYPE OF ANALYSIS THAT YOUR PROVIDE.

SUMMARY

We have just explored some of the most basic displays and statistical procedures used in the analysis of public policy. Hopefully, you will now have a good grasp on how these methods can be used to examine public policy issues and you will take additional courses to become proficient in their use. Remember, not only public policy analysts use statistics—politicians and journalists do also. To understand contemporary public policy issues, you need to be able to understand the use of statistics.

TABLE 6.7: REVIEW

DISPLAY OR STATISTIC	PURPOSE	EXAMPLE
Table	Compare quantitative information for different years, locations, or other units	● Crime rates in different cities for two different periods of time
Bar Graphs	Compare quantitative information for different years, locations, or other units	● Compare unemployment rates for regions of the United States
Trend Line	Show past, present, and future projection of data for periods of time	● Size of budget deficits 1975-1985
Pie Charts	Show how a quantity is divided into parts	● Allocation of tax dollars to different type of government expenditures
Percentages to Describe Differences	Show the percent difference between two periods of time or two locations or other type of units	● Tax receipts increased by 10% between 1983 and 1984 ● One country's per capita military expenditure is 25% higher than another's
Means	Show the average for a number of periods of time or locations or other types of units	● The average inflation rate between 1981 and 1985 was 6% ● Average unemployment in the mid-Atlantic states is 8%
Scatterplot and Pearson's r	Show relationship between two interval variables	● Unemployment rate and crime rate is correlated at a .55

PART FOUR: FORMULATION AND EVALUATION OF PUBLIC POLICY ISSUES

Now that you have learned: 1) the basic public policy concepts, 2) how to gather information, and 3) the information-analysis skills to study public policy issues on a systematic basis, you are ready to put these skills to work a public policy issue of your choice. In this section, you will deal with two sets of questions. The first has to do (a) with developing a viewpoint on the essential social problems that need to be addressed by a public policy and (b) with what the best public policy alternative would be. The second has to do with how you would determine whether or not a public policy you proposed had, in fact, made a difference.

The six previous chapters introduced you to the basic public policy analysis skills. Beginning with this chapter, and continuing in Chapters 8, 9, and 10, you will be expected to conduct a thorough analysis of a single policy issue of your choice. You will be asked to take a position on this issue. To do this, you will either have to take a position based on your own goals or on the goals of a group that you want to represent.

Chapter 7: Formulating a Position on a Public Policy Issue

- Step 1: Identify the Nature of the Problem
- Step 2: Provide Evidence that Social Conditions Exist that Someone Feels Is a Problem
- Step 3: Identify Underlying Factors Contributing to the Problem
- Step 4: List Public Policy Alternatives and Choose the Preferred Alternative

Chapter 8: Evaluating Public Policies

- Step 1: Identify and Collect Information on Benefits and Costs
- Step 2: Select and Measure a Benefit or Cost as the Dependent Variable
- Step 3: Identify Factors that Affect the Dependent Variable
- Step 4: Choose a Research Design
- Step 5: Recognize Plausible Alternative Explanations for Positive and Negative Findings

CHAPTER 7

FORMULATING A POSITION ON A PUBLIC POLICY ISSUE

This chapter introduces you to how to formulate your position on a public policy issue. The process would be the same whether you were a player trying to influence policy or someone working for a government agency or interest group.

OBJECTIVES

Upon completion of this chapter, you should be able to identify the problem that is creating the public policy issue, demonstrate with evidence that the problem exists, describe the major factors contributing to the problem, list public policy alternatives and provide a rationale for the alternative you select as preferred.

INTRODUCTION

Formulating a position on a public policy issue requires that you clearly state what the problem is and what the possible solutions to the problem are. As we have discussed in Chapter Three, the task of the public policy analyst is not simply to describe social conditions or even to explain why they exist and forecast what they might be. It is also to evaluate whether or not those conditions need to be improved and what, if anything, the government should do about improving them. To perform these tasks as a public policy analyst, you need to ask the right questions and come up with answers to those questions. Although you will never know definitively whether the questions and answers were right until after the prescribed policy is implemented, you must begin somewhere. This chapter introduces the four essential steps in formulating a position on a public policy issue.

At this point in the course, you should select that issue and become as expert on it as possible.

STEP 7.1: Identify the Nature of the Problem

Public policy issues arise because different segments of a society feel a "problem" exists. An undesirable social condition is what is meant by "problem" in this section of the course. Individuals and groups frequently have different ideas about the impact of those social conditions. Some may not be as bothered by them as others, and still others might support the status quo. In any case, for a public policy issue to exist, some members of the community must feel that social conditions should improve. Such problems are not hard to find. An illustrative list appears in the table below.

TABLE 7.1: Public Policy Problems at Different Jurisdiction Levels

SCHOOL LEVEL

- Low student morale
- High absenteeism
- Poor academic performance
- Vandalism of property

COMMUNITY LEVEL

- High crime rate
- Deteriorating roads
- Population decline
- Too much commercial development

STATE LEVEL

- Loss of business
- High taxes
- Increased traffic fatalities

NATIONAL LEVEL

- Escalating medical costs
- Decline in exports
- Federal budget deficit

INTERNATIONAL LEVEL

- Famine in Africa
- High debt by LDC's
- Acid rain

Any given public policy issue may be generated by several problems. For example, proposals to simplify the federal income tax are stimulated by the reaction of some segments of the society to several conditions including:

- The number of tax loopholes
- The need for more tax revenues
- The amount of time necessary to complete a tax form
- The amount of tax evasion
- The distribution of the tax burden on the population

The first step in formulating a position on a public policy issue is to identify the major problems—that is, social conditions over which there is dissatisfaction.

EXAMPLE FOR EXERCISE 7.1
Identify the Nature of the Problem

BRIEFLY DESCRIBE SOCIAL CONDITIONS WHICH CONSTITUTE A PROBLEM THAT YOU THINK NEEDS TO BE ADDRESSED.

The social condition that needs to be addressed is methaqualone abuse in New York State.

Methaqualone was first marketed in the United States in 1965 as a non-barbiturate hypnotic and sedative under the brand name Quaalude. It was originally hailed as safe and less addicting than barbiturates, but it was soon apparent that the drug was highly addictive. By 1973, the adverse effects of methaqualone resulted in its being classified as a Schedule II drug, the strictest control placed on a drug with known medical use. Despite these regulations, methaqualone continues to represent a serious health problem and law enforcement challenge.

Most methaqualone is legally manufactured for the relief of insomnia and anxiety. Within the last five years, methaqualone has become an enormously popular recreational drug. Methaqualone affects mental alertness and judgment, physical coordination, and reaction time. It also has an additive effect and is especially dangerous if used in combination with alcohol.

EXERCISE 7.1
Identify the Nature of the Problem

BRIEFLY DESCRIBE SOCIAL CONDITIONS WHICH CONSTITUTE A PROBLEM THAT YOU THINK NEEDS TO BE ADDRESSED.

STEP 7.2: Provide Evidence that Social Conditions Exist That Someone Feels is a Problem

Just asserting that a problem exists is not an adequate basis for good public policy formulation. You must also provide evidence that the problem exists.

The rules indicated in Chapter 4 concerning good monitoring, forecasting, and evaluating should be followed in providing evidence that a problem exists. It is necessary to present evidence showing that social conditions are getting worse or are poorer in comparision to those in similar situations. In addition, an argument needs to be presented that conditions are unlikely to improve if nothing is done.

Providing the best possible evidence is a difficult task. At the very least, anecdotal information that illustrates that the problem exists is necessary. But it is better to use systematic sources of data that can be found in government documents, scholarly research, statistical sources, and if need be, through factual and attitudinal surveys. Use the skills you learned in Chapters 4, 5, and 6 to acquire and present the evidence necessary to demonstrate that the social conditions, which are thought to be a problem, actually exist.

In some cases, it is very hard to find the best evidence. If the problem is low school morale, for example, there is little clear-cut proof that can be provided to demonstrate the existence of the problem. "Too much commercial development" is difficult to demonstrate not because data on the amount of commercial development cannot be found but because what constitutes "too much" is not easily determined.

The need to provide empirical evidence is not only necessary to demonstrate that a problem exists, it also forces the analyst to be clear about exactly what the problem is. By collecting documented information on, for example, the decline in business in New York State, the problem may become redefined from the "decline in business activities" in the state to the "loss of skilled jobs." The narrower definition of the problem might lead to more realistic policy proposals.

EXAMPLE FOR EXERCISE 7.2
Provide Evidence that a Problem Exists

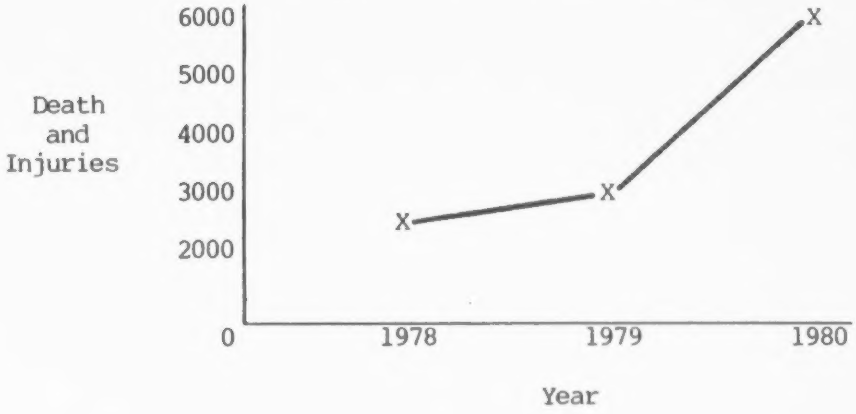
PRESENT EVIDENCE THAT A PROBLEM EXISTS. USE THE GUIDELINES FOR MONITORING, FORECASTING, AND EVALUATING SOCIAL CONDITIONS AS WELL AS STATISTICAL PRESENTATIONS COVERED IN EARLIER CHAPTERS.

According to the 1980 Drug Abuse Warning Network (DAWN) Report, methaqualone was the fifth most abused drug nationally. Deaths and injuries attributable to this drug have been increasing more rapidly than any other single drug substance, between 1978 and 1980 there was a 154% increase.

In New York State, methaqualone misuse is localized in the metropolitan New York City area. In 1981, 50,895 prescriptions were written for methaqualone in New York State; a 67% increase over the 30,410 prescriptions written downstate in the metropolitan New York City area. Moreover, New York City ranks second in the nation in the number of emergency room incidences relating to methaqualone misuse.

The trend line below shows the tremendous increase in the abuse of this drug.

Deaths and Injuries Associated with Methaqualone Abuse



Source: Drug Abuse Warning Network (DAWN) Annual Report

EXERCISE 7.2
Provide Evidence that a Problem Exists

PRESENT EVIDENCE THAT A PROBLEM EXISTS. USE THE GUIDELINES FOR MONITORING, FORECASTING, AND EVALUATING SOCIAL CONDITIONS AS WELL AS STATISTICAL PRESENTATIONS COVERED IN EARLIER CHAPTERS.

STEP 7.3: Identify Underlying Factors Contributing to the Problem

Chapter 3 introduced the idea of "explanation" as a type of analysis. In this Step, we will apply the principles of explanation to identify the reasons behind the problem you have identified and measured in Steps 1 and 2.

It is the nature of social science research that specific factors cannot be precisely determined. The reason for this is that all social conditions are "caused" by many factors. Sometimes research suggests that certain factors are more important than others. But because changing human behavior is behind the social conditions, the factors rarely stay in the same relation to each other. It is sometimes sufficient first to come up with what seems to be a complete list of factors and to rate their importance on a range of high, medium, and low.

Having identified the problem and provided evidence that the problem does in fact exist, the next step is to provide an analysis of the social, economic, and political factors that are assumed to cause the problem. The search for factors can require virtually unlimited amounts of research and never be fully satisfied. In conducting such a search, you need only come up with a list of factors. The list is important because any proposed solution to the problem must recognize the factors underlying it.

To illustrate, suppose we are confronted with the problem of a growing number of burglaries in a local community. We might identify as the factors of the increase:

- understaffed police force
- increase in the number of wealthy households
- failure of people to take adequate security precautions
- growing number of young people in the community
- stricter police enforcement in neighboring communities
- increased unemployment in the area
- increased illicit drug usage

Each of these factors are empirically and logically related to the increase in the number of burglaries. Coming up with such a list is a beginning to thinking about possible public policies for dealing with burglaries.

How do we come up with such a list of factors? In the above case, the first and perhaps most important task is to ask what is likely to contribute to the increase in burglaries. Look around for related conditions such as unemployment. Once some tentative hunches have been developed, library research should be undertaken using the skills covered in Chapter 4. Academic and government studies frequently try to isolate the causes of social conditions that are considered to be problems. Interviewing knowledgeable people is also a good way to come up with possible reasons.

EXAMPLE FOR EXERCISE 7.3
Identify Underlying Contributing Factors

BRIEFLY LIST AND DESCRIBE WHAT BROAD UNDERLYING SOCIAL, POLITICAL AND ECONOMIC FACTORS CONTRIBUTE TO THE PROBLEM THAT YOU HAVE IDENTIFIED. WHERE APPROPRIATE, USE PUBLISHED RESEARCH OR STATISTICS AND DISPLAYS TO DEMONSTRATE THE EXISTENCE OF THE FACTORS AND HOW THEY CONTRIBUTE TO THE PROBLEM.

The growing misuse of methaqualone can be attributed to several factors including the growing trend toward drug abuse throughout the society and the ease with which the drug can be obtained. The first factor is caused by broad social and economic conditions in the society including increased social mobility, the breakdown of the nuclear family, the general affluence of the populace and the pressure to succeed. The ease of acquisition is illustrated by the table below.

Methaqualone Source--Emergency Room Mentions
New York City Metropolitan Area

	1978	1979	1980
No. of Mentions	260	664	1129
Source (%)			
Legal Prescription	11	3	2
Forged Prescription	+	-	-
Over the Counter	-	-	-
Stolen	2	+	+
Street Buy	47	66	75
Gift	6	4	3
Other	1	-	+
No Response	33	27	18

*From Drug Abuse Warning Network (DAWN) Annual Report
- Denotes Zero (0) Mentions
+ Less Than 0.5%
Note: Percentages Not Computed Where Drug Mentions Totaled Less Than 20
Multiple Mentions are Possible

EXERCISE 7.3
Identify Underlying Contributing Factors

BRIEFLY LIST AND DESCRIBE WHAT BROAD UNDERLYING SOCIAL, POLITICAL AND ECONOMIC FACTORS CONTRIBUTE TO THE PROBLEM THAT YOU HAVE IDENTIFIED. WHERE APPROPRIATE, USE PUBLISHED RESEARCH OR STATISTICS AND DISPLAYS TO DEMONSTRATE THE EXISTENCE OF THE FACTORS AND HOW THEY CONTRIBUTE TO THE PROBLEM.

STEP 7.4: List Public Policy Alternatives and Choose the Preferred Alternative

After having identified the problem or problems, providing evidence of their existence and indicating the factors contributing to them, you should explore government policies that might remedy the situation. Remember that in some cases, one alternative (and possibly the best one) is for no government action or no change in existing government policies. Some problems might correct themselves. For example, the problem of low school morale might take care of itself as soon as the football team ends its thirty-five game losing streak. In any case, the purpose of this step is the examine alternative policies to deal with the identified problems.

It is important to develop a list of alternatives--at least three--before coming up with the one preferred. The task of identifying alternative policies is useful because it helps the analyst anticipate both support for and opposition to a proposal. It also forces the analyst to weigh the costs and benefits of different policy prescriptions. Moreover, in the process of thinking about alternatives, new prescriptions may evolve.

Once alternatives have been listed, a tentative choice of the most preferred should be selected. This can be done by assessing which alternative would be most effective in dealing with the problem and choosing the alternative that has the best ratio of benefits to costs. Since such an analysis requires an estimate of future benefits and costs, the choice has to be tentative at this point. Two key questions to ask are:

1. Which policy is most likely to be accepted by those who will determine whether or not the policy is implemented?

2. Which alternative appears to have the maximum beneficial impact with the minimum cost?

EXAMPLE FOR EXERCISE 7.4
List Public Policy Alternatives and Choose the Preferred Alternative

PROVIDE AT LEAST THREE PROPOSED PUBLIC POLICY ALTERNATIVES TO DEAL WITH THE PROBLEM YOU HAVE IDENTIFIED. EACH ALTERNATIVE MUST SPECIFY THE ACTUAL GOVERNMENT OR GOVERNMENT AGENCY THAT WILL CARRY OUT THE PROPOSED ACTION. INDICATE WHICH PROPOSAL YOU THINK IS MOST PROMISING BY LISTING IT FIRST. DISCUSS WHY YOU CONSIDER IT TO BE THE PREFERRED CHOICE OVER THE OTHER TWO.

Recommendations to curtail methaqualone abuse in New York State include:

1. Rescheduling of the drug as a Schedule I Controlled Substance, thus making it illegal to possess, prescribe, or distribute the drug in New York State.

2. Permit the dispensing of methaqualone only by public or non-profit hospitals.

3. Requiring a 48 hour delay in the dispensing of methaqualone prescriptions whereby the pharmacist will verify each prescription with the prescribing doctor.

Alternative #1, putting methaqualone on a Schedule I Controlled substance list, is preferable to the other two alternatives for several reasons. First, it uses an existing procedure for regulating drug use considered to be dangerous and, therefore, would not require a new procedure as the other two alternatives would. Secondly, requiring a 48-hour delay in the dispensing of the drug by prescription would be open to abuse by pharmacists. Finally, permitting its distribution only through public and non-profit hospitals would not eliminate one of the main sources of current illegal distribution.

EXERCISE 7.4

List Public Policy Alternatives and Choose the Preferred Alternative

PROVIDE AT LEAST THREE PROPOSED PUBLIC POLICY ALTERNATIVES TO DEAL WITH THE PROBLEM YOU HAVE IDENTIFIED. EACH ALTERNATIVE MUST SPECIFY THE ACTUAL GOVERNMENT OR GOVERNMENT AGENCY THAT WILL CARRY OUT THE PROPOSED ACTION. INDICATE WHICH PROPOSAL YOU THINK IS MOST PROMISING BY LISTING IT FIRST. DISCUSS WHY YOU CONSIDER IT TO BE THE PREFERRED CHOICE OVER THE OTHER TWO.

SUMMARY

We have taken you through the four steps essential to formulating a position on a public policy issue. In completing those steps, you should now have substantial background information about your public policy issue. You should also be familiar with the process of formulation so that you can apply it to other issues that you might face in the future.

TABLE 7.2: REVIEW

CONCEPT	DEFINITION	TASK	EXAMPLE
Problem	Social conditions considered undesirable	Identify the problems underlying a public policy issue	• High automobile fatality rate • Unemployment
Evidence of a Problem	Information that documents the existence of undesirable social conditions	Collect and display research findings	• Trend line on automobile fatality rate • Unemployment statistics
Factors Contributing to the Problem	Information indicating factors contributing to a problem	Collect and display research findings	• Alcohol consumption related to automobile fatalities • Slow economic growth related to unemployment
Preferred Policy Alternative	Best policy proposal from a list of proposals	List alternatives and indicate why one is preferred over the others	• Raising drinking age is preferred over lowering speed limit as a solution to high automobile fatalities

CHAPTER 8

EVALUATING PUBLIC POLICIES

This chapter introduces the most elemental principles of evaluation research. It indicates how you could determine the relative worth of a public policy.

OBJECTIVE

Upon completion of this chapter, you should be able to identify and measure the benefits and costs of a policy, and design a research project that will assess whether the policy achieves one or more of the effects specified in the list of benefits and costs.

INTRODUCTION

In the previous chapter, we discussed the formulation stage of public policy. This chapter examines the tasks you perform once the policy has been implemented. Evaluation is an essential task of public policy analysis because it tells us whether or not, or at least to what degree, the public policy we have selected has worked. Unfortunately, it is a task not frequently carried out in a systematic way. Usually, policy-makers are so consumed in debating what policies to follow and then implementing the selected policies that they do not have the time or energy to assess the impact of the policy itself.

For that reason alone, it is essential that public policy analysts develop skills in evaluating policies. Failure to evaluate policies is bad for several reasons:

- Policies that do not work may be continued
- Policies that do work may be abandoned
- Potential lessons from our mistakes are lost
- Policy-makers are not held accountable for what they do

The last point requires some elaboration. If we do not examine the impact of a policy, policy-makers can continue or stop policies because they feel it is works or does not work. These feelings may be based on hunches or on political pressures from those who support or oppose the policy. Even though gut feelings and pressure from constituencies will always shape what policy-makers do, a more objective standard is needed. Systematic evaluation is the method for providing that standard.

As we will see in this chapter, there are quite a few problems facing anyone attempting to assess a public policy. The problems include difficulties in measuring precisely and accurately the benefits and costs of a policy as well as difficulties in isolating the policy as a factor shaping social conditions. Even though these difficulties exist, however, we still need to evaluate policies as systematically as possible.

STEP 8.1: Identify and Collect Information on Benefits and Costs

The concepts of "benefits" and "costs" have a technical meaning when applied to the analysis of public policies. "Benefits" are consequences of a policy which are considered by the analyst to be good for the society or some segment of it. "Costs" are consequences of a policy which are negative for the society as a whole or some segment of it. For example, the primary benefits of mandatory seat belt laws are fewer fatalities and injuries to those involved in automobile accidents. The primary costs of the law are a loss of freedom of choice for drivers and passengers, and more law enforcement expenditures.

Note that benefits and costs like the goals mentioned in Chapter 2 can be tangible, usually expressed in the form of money or statistics, and intangible or hard to measure concretely (e.g., individual freedom). Both tangible and intangible benefits and costs are important to consider in evaluating an existing or proposed public policy. Three sources of benefits and costs are:

1. The action itself

2. The direct consequences of the policy

3. The secondary consequences of the policy

The first category applies only when the policy itself represents a benefit or cost. For example, a policy to hire 100 youths to work in city parks has the benefit of 100 jobs, and the cost to the government of the salaries of the 100 jobs. Direct and secondary consequences are less easy to identify. Direct consequences are, in effect, the goals of the policy. For example, for the policy above, a reduction in vandalism of public property might be a benefit. Secondary consequences are results that are not the major reason for the policy and result from the direct consequences. A secondary benefit from creating 100 park jobs for youths might be increased park usage by people who had feared harassment in the parks by unemployed youths. A secondary cost might be the need to hire additional staff because of the increased number of users.

In listing the benefits and costs, be sure to consider the three sources listed above and to identify those benefits and costs that are most important. Once that is done, the next step is to determine how you can collect information to measure the benefits and costs. To do this, you will need to do the following:

1. Figure out the most precise way of measuring each benefit and cost.

2. Locate data sources that provide the necessary information.

Some benefits and costs can be precisely defined. Costs measured in dollars or person-hours of work that are part of the implementation of the policy can clearly be identified and, assuming government records are kept, be measured. Statistics that measure the societal conditions that are a consequence of the policy can also be used. For the mandatory seat belt law in New York State, statistics can be gathered on numbers of traffic fatalities. Where less tangible benefits and costs are identified, such as loss of individual freedom, measurement is more difficult. In some cases, a survey might be conducted to measure the feelings of people affected by the law. In some case, only subjective estimates of knowledgeable observers can be used.

Once you have defined the benefits and costs as precisely as you can, use your library and survey research skills covered in Chapters 4 and 5 to collect the necessary information.

EXAMPLE FOR EXERCISE 8.1
Identify and Collect Information on Benefits and Costs

(A) STATE YOUR PREFERRED POLICY. (B) IDENTIFY THE THREE MOST IMPORTANT BENEFITS AND COSTS. NEXT TO EACH ONE, DESCRIBE HOW YOU WOULD MEASURE IT AND WHAT YOUR SOURCE OF DATA WOULD BE.

A. POLICY: Put methaqualone on Schedule I

B.	BENEFITS	HOW MEASURED AND SOURCE OF INFORMATION
1.	Reduce medical care costs resulting from misuse.	Measured in terms of reports of admissions to emergency rooms for methaqualone abuse as reported in the Drug Abuse Warning Network. The figure used will be per 500,000 people so that comparison with a control group (another city of a different size) can be made.
2.	Reduced deaths attributed to methaqualone misuse.	Number of deaths per capita as reported in Drug Abuse Warning Network (DAWN) Annual Reports.
3.	Reduced number of thefts and prescription forgeries.	Number of thefts and prescription forgeries reported to the police.

	COSTS	HOW MEASURED AND SOURCE OF INFORMATION
1.	Increased in the illegal use of other drugs.	Number of deaths per capita reported in Drug Abuse Warning Network (DAWN) Annual Reports for other drugs.
2.	Less legitimate use by physicians because of increased restrictions.	Decline in number of legitimate prescriptions for the drug would be difficult to measure but subjective estimates by doctors could be used.
3.	Loss of revenue to the pharmaceutical manufacturers of the drug.	Quantities of the drug sold would be difficult to obtain from companies but might be inferred from business data on the firms.

EXERCISE 8.1

Identify and Collect Information on Benefits and Costs

(A) STATE YOUR PREFERRED POLICY. (B) IDENTIFY THE THREE MOST IMPORTANT BENEFITS AND COSTS. NEXT TO EACH ONE, DESCRIBE HOW YOU WOULD MEASURE IT AND WHAT YOUR SOURCE OF DATA WOULD BE.

A. POLICY:

B. BENEFIT	HOW MEASURED AND SOURCE OF INFORMATION
1.	
2.	
3.	

COSTS	HOW MEASURED AND SOURCE OF INFORMATION
1.	
2.	
3.	

Step 8.2: Select and Measure a Benefit or Cost As the Dependent Variable

For a proposed policy, you would ideally want to assess the degree to which the policy contributed to each of the major benefits and costs you have identified. However, as we have already seen, it is sometimes difficult to measure precisely and to collect data on some costs and benefits. In the rest of this chapter, we will also see that even when you can measure the costs and benefits easily, it is difficult to assess the impact of the policy in a definitive manner. However, before we do that, we need to introduce to the concept of a dependent variable.

For the kind of public policy analysis we are describing, a dependent variable is a measurable benefit or cost that is assumed to be affected by the policy. The dependent variable must have two characteristics:

- It must be one of the most important benefits or costs you have already described.
- It must be precisely measured in a way that data can be obtained for it.

For the mandatory seat belt law, for example, you might choose the number of auto fatalities as your dependent variable because it is (1) the single most important benefit attributed to the law and (2) precise statistics are available. You have already described in Exercise 8.1 the benefits and costs of your preferred policy as well as how you measure each generally. In order to conduct a serious and systematic evaluation of a public policy, you will now need to (1) select one of the most important benefits or costs (2) provide a precise definition of the dependent variable and (3) indicate a specific source or method of data collection you would use to collect information on the dependent variable.

EXAMPLE FOR EXERCISE 8.2

Select and Measure a Benefit or Costs as the Dependent Variable

PRECISE DEFINITION OF DEPENDENT VARIABLE:

Number of reports of admissions to emergency rooms for methaqualone abuse in New York metropolitan area, reported as a proportion of 500,000 in the area. (Although this is a state law, New York city is the main area in which a change of policy may be expected to have an effect.)

WHY YOU HAVE SELECTED IT:

This a reliable figure based on the diagnoses of trained medical professionals. This figure is closely related to other important variables such as the the deaths from methaqualone abuse and the medical costs of treatment for methaqualone abuse.

SOURCE OR METHOD OF DATA COLLECTION:

The Drug Enforcement Agency produces annual reports by the Drug Abuse Warning Network (DAWN). It has published this report each year since 1975 and is expected to continue to do so.

EXERCISE 8.2

Select and Measure a Benefit or Costs as the Dependent Variable

PRECISE DEFINITION OF DEPENDENT VARIABLE:

WHY YOU HAVE SELECTED IT:

SOURCE OR METHOD OF DATA COLLECTION FOR PAST AND FUTURE INFORMATION:

Step 8.3: Identify Factors That Affect the Dependent Variable

Once you have selected a dependent variable, you are ready to assess the impact of a policy on that variable. As we pointed out in Steps 3.3 and 7.3, it is very difficult to determine the causes of social conditions. Since public policy is one type of "cause," it is also very difficult to assess the impact of a policy on the dependent variable. Carefully planned research can help you market this assessment.

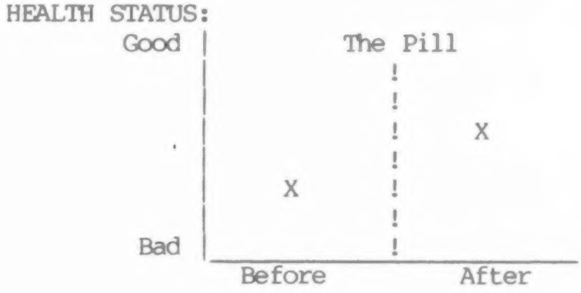
The rest of this chapter introduces you to the process of designing research to determine whether or not the public policy you have proposed has produced the benefit or cost you have identified in your dependent variable. It is impossible to make a definitive determination of whether or ot the policy has worked, but it is possible to make a systematic assessment of its possible impact.

To illustrate, why it is so difficult to make a definitive assessment, consider the following example.

Suppose that you felt ill on Monday, visited the health service on Tuesday and receive a one-day supply of pills to alleviate the problem. On Wednesday you feel fine. You are then asked by the physician whether you feel better. You tell him, "Yes," truthfully. Assume for simplicity that, in fact, your health status has improved.

Based on this simple comparison of your condition before receiving the pill versus after, the physician infers that the pill has "worked," i.e., that the treatment's effects were positive. The size of the effect is gauged from the size of the improvement in health status from the following graph:

Figure 8.1: Effect of Pill Treatment



However, the physician's inference could be wrong. There are several other plausible alternative explanations--that is, reasons why you might feel better other than that the pill "caused" you to feel better. First, you may have had the 48-hour flu and you would have felt better without the pill. Second, perhaps you went to bed or drank a lot of fluids which made you feel better. Third, perhaps the pill had a placebo effect--the simple fact of taking it made you felt better. There is no way to determine whether or not the pill worked based on the information we have provided you.

In order to make that determination, you would have to conduct a systematic study in which you had a large enough sample of people who were sick, and you would need to: (1) give the pill to some, (2) not give it to others, and (3) give still other a placebo pill. The study would be based on a research design that enabled you to eliminate as many plausible alternative explanations as you could.

Similarly, in assessing the impact of a public policy, you need to construct a research design in which you can isolate as much as possible the effect of the policy from other explanations. The policy is analogous to the pill in our example above and the way you feel is analogous to the dependent variable. Factors other than the policy that might be influencing the dependent variables are called plausible alternative explanations.

The diagram below illustrates the use of the terms we have just explained. Make sure you understand these terms before moving on to the next step.

TABLE 8.1: Policy and Variables

POLICY	PLAUSIBLE ALTERNATIVE EXPLANATIONS	DEPENDENT VARIABLE
1. Take a pill	● Normal course of disease ● Fluid intake ● Bedrest ● Psychological effect of taking the pill ● Time	Health status
2. Mandatory seat law	● Age of driving population ● Alcohol consumption ● Safety levels of cars on the road	Traffic fatalities

EXAMPLE FOR EXERCISE 8.3
Identify Factors That Affect the Dependent Variable

IN THE SPACE BELOW INDICATE THE POLICY VARIABLE YOU ARE ASSESSING, THE VARIABLES THAT MAY BE PLAUSIBLE ALTERNATIVE EXPLANATIONS, AND THE DEPENDENT VARIABLE.

POLICY ------------->	DEPENDENT VARIABLE	<------------- PLAUSIBLE ALTERNATIVE EXPLANATIONS
Put drug on Schedule 1	Number of admissions to emergency rooms for methaqualone abuse in the New York area per 500,000 people	Price and availability of other drugs Attitudes toward drug use Price of methaqualone

EXERCISE 8.3
Identify Factors That Affect the Dependent Variable

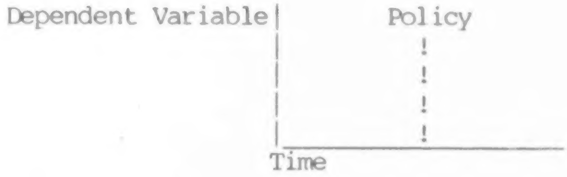
IN THE SPACE BELOW INDICATE THE POLICY VARIABLE YOU ARE ASSESSING, THE VARIABLES THAT MAY BE PLAUSIBLE ALTERNATIVE EXPLANATIONS, AND THE DEPENDENT VARIABLE.

POLICY	------------->	DEPENDENT VARIABLE	<-------------	PLAUSIBLE ALTERNATIVE EXPLANATIONS

Step 8.4: Choose a Research Design

Policy analysts have developed many sophisticated research designs to evaluate the impact of a policy. Each of these designs seeks to isolate the policy as the contributing factor from other plausible alternative explanations. In this section, we will present the four most commonly used and easily implemented research designs. These designs will be illustrated through an adaptation of a trend graph. The adaptation has the dependent variable on the Y axis and time (usually in years) on the X axis. It also has a vertical dotted line indicating when the policy was or will be implemented.

Figure 8.2: Framework for Illustrating Research Design

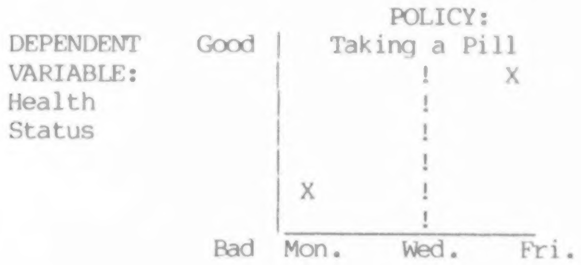


Each of the following four research designs uses the trend format, which means that each has the dependent variable expressed on the vertical or y axis and time periods before and after the policy is implemented on the x or horizontal axis. The data is then placed in the appropriate place on the graph.

ONE-GROUP PRETEST/POSTTEST

This is the design used in Step 8.3. As its name implies, it looks at one group only, and gathers information from one time period before the policy (pretest) and one period after the policy (posttest). It is the most commonly used, but weakest and least desirable of the four types discussed in this chapter. Its weakness stems from its inability to eliminate alternative explanations. In general, the design looks like this:

Figure 8.3: Pill Example Using One Group Pretest/Posttest



At the time of the pretest (Monday), you observe that you are not feeling too well. You go to the health center on Wednesday for the pill treatment, which is the policy. Two days later, you notice an improvement in your health status. The research design would produce results like those in Figure 8.3. For the discussion of this design and the ones that follow, a small change in the pill-taking example will be made. Assume that from now on you are part of a larger group of people given the same drug. This change is done for statistical reasons. The pill-taking example will be used to illustrate the strengths and weaknesses of this design.

Several plausible alternative explanations threaten this design. Between the pretest observation and the posttest observations, many other change-inducing events could have taken place besides the experimental treatment. After a winter of drab and depressing days, the sun might have come bursting out with all its warmth on the day that you went down to the health center. Thus, the reason that you feel better may be due to the beautiful day rather than the pill you took. In order to be a plausible alternative explanation, the event should have occurred to most of the people in the group. The longer the lapse between the pretest/posttest, the more likely factors other than the policy itself produced change in the dependent variable.

TIME-SERIES

The health center wanted to turn to a Time-Series research design to evaluate the efficiency of the drug. Suppose that we measured the individual health status of a group of students over an extended period of time. During that time, students periodically reported to the health center for an examination. Starting in January, the health center gave the drug to the students. The design would look like the following:

Figure 8.4: Pill Example Using Time-Series

```
DEPENDENT
VARIABLE:
Average Health
Status of
Student                                 POLICY:
                                     Taking a Pill
             Good |                         !
                  |                         !            X       X     X
                  |                         !    X
                  |                   X     !
                  |       X                 !
                  | X           X           !
              Bad |                         !
                  ------------------------------------------------------
                  Sept.  Oct.  Nov.  Dec.  Jan.  Feb.  March   April May

                                Months in Academic Year
```

Basically, the Time-Series Design contains a series of observations or measurements on a group or individual before and after the policy goes into effect.

The most obvious weakness of this design is that there may be some events other than the policy that caused the change in the dependent variable. As we noted in the One-Group Pretest/Posttest, this design is susceptible to the influences such as good weather at the time the health center administered the pill.

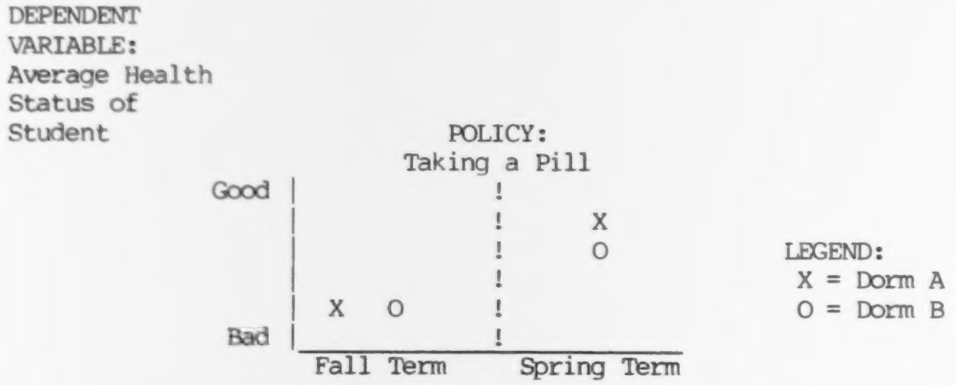
NONEQUIVALENT CONTROL GROUP

This is one of the most popular designs for program evaluation. Suppose that the health center wished to use two different dormitories for its study concerning the effectiveness of the drug. All the students are given a pretest examination and later a posttest. In between tests, subjects are divided into two groups:

1. Treatment group (Dorm A as represented by X)--those that get the pill.
2. Control group (Dorm B as represented by O)--those that do not get the pill.

This design would produce results like the following, assuming the pill made people better.

Figure 8.5: Pill Example Using Nonequivalent Crontrol Group

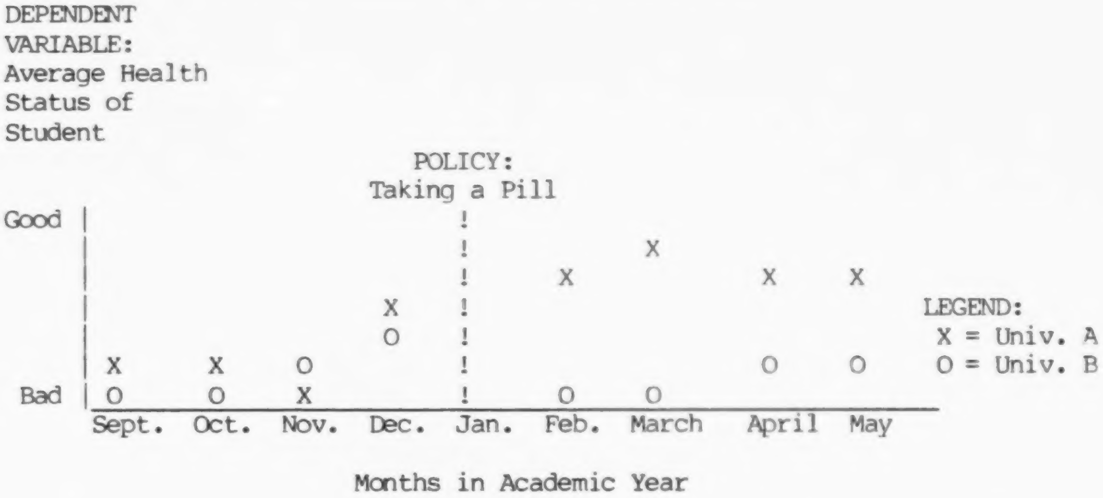


This design is better than the One-Group Pretest Posttest because it allows you to eliminate alternative explanations by comparing the treatment and control groups. Better weather would effect both Dorm A and Dorm B and, if it were the reason for better health, the results would not appear as they did in Figure 8.5. The weakness in this design is the lack of a long time period in which several observations can take place since the improvement in health in Dorm A and the lack of improvement in Dorm B may have resulted only by coincidence. It is also possible that factors such as different food in the two dorms may have affected the two groups differently.

MULTIPLE TIME-SERIES

Suppose that, in addition to the time-series data collected for the previous design, the health center corresponded with another university health center and asked it to collect a similar time series without the treatment, being presented. Assuming the pill improved students' health, this research design would produce the following results:

Figure 8.6: Pill Example Using Multiple Time-Series



In essence, the Multiple Time-Series design is a combination of the Nonequivalent Control Group design and the Time-Series design. In most evaluations of this type, evaluators obtain their data from a similar institution which is not exposed to the treatment.

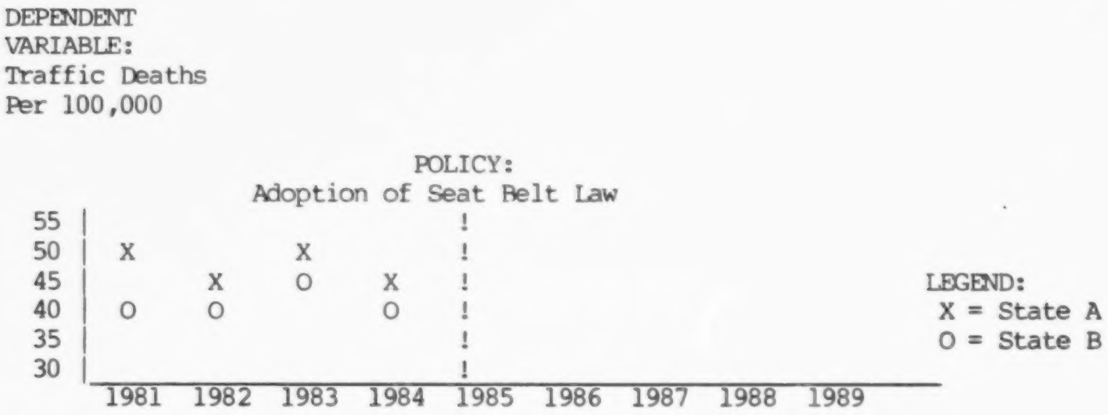
The design contains within it the strengths of the two previous designs. In addition, any change in the dependent variable caused by the treatment is confirmed twice, first against the control group and second against its own pretest observations.

In some cases, you will already have data available to you for part of your design. If it is a time series for example, you should record data from the past. When presenting your design, place this available historical data in the graph. Remember to distinguish between treatment and control observations with an X and an O.

To illustrate, suppose that you were comparing number of traffic vehicle deaths per 100,000 people in State A which had adopted the mandatory seat belt law and State B which has not. You would need to use traffic deaths per 100,000 as your dependent variable because of the difference in population size between the two states.

We have data from 1981 through 1984 so that we can plot that information on the graph. We leave the rest of the graph blank at this time because we do not have that information. Our expectation is that if the mandatory seat belt law has the effect of reducing traffic vehicle deaths, the X's representing State A would decline while the O's representing State B would stay at the same general level. You would set up the graph in the following way:

Figure 8.7: Hypothetical Data Prior to Implementation of Mandatory Seat Belt Law



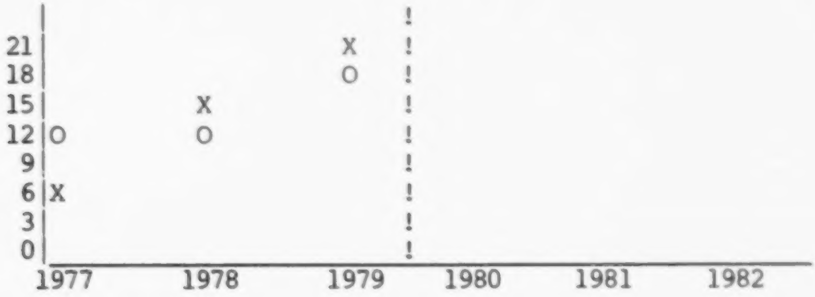
EXAMPLE FOR EXERCISE 8.4
Choose A Research Design

A. CHOOSE ONE OF THE FOUR RESEARCH DESIGNS JUST DESCRIBED. PROVIDE ALL INFORMATION REQUESTED BELOW. USE X'S FOR THE TREATMENT GROUP AND O'S FOR THE CONTROL GROUP IF NECESSARY.

RESEARCH DESIGN: Multiple Time-Series:

DEPENDENT VARIABLE:
Emergency Room
admissions for
methaqualone
abuse per
500,000 people

POLICY: Legislation placing methaqualone on Schedule 1 (Assumed to be implemented in 1980)



LEGEND:
X = New York Metropolitan Region
O = Chicago Metropolitan Region

SOURCE: National Institute on Drug Abuse, Quarterly Report, October-December 1979.

B. JUSTIFY WHY YOU PICKED YOUR DESIGN INSTEAD OF ANY OF THE OTHER THREE.

Time-series was used because the data is available for several years. In addition, Chicago is a good control city to compare the results of the policy since the admissions per 500,000 for methaqualone abuse is about the same, and is increasing, in the two cities.

EXERCISE 8.4
Choose A Research Design

A. CHOOSE ONE OF THE FOUR RESEARCH DESIGNS JUST DESCRIBED. PROVIDE ALL INFORMATION REQUESTED BELOW. USE X'S FOR THE TREATMENT GROUP AND O'S FOR THE CONTROL GROUP IF NECESSARY.

RESEARCH DESIGN:

DEPENDENT VARIABLE:

POLICY:

<--------TIME PERIODS OR DATES------->

LEGEND:
X =
O =

SOURCE:

B. JUSTIFY WHY YOU PICKED YOUR DESIGN INSTEAD OF ANY OF THE OTHER THREE.

Step 8.5: Recognize Plausible Alternative Explanations for Positive and Negative Findings

If you were to conduct the research design, you have just outlined, you would come up with one of two results:

1. Positive results in which the data did show that the policy had the assumed impact on the dependent variable just as you had supposed in your benefit or cost statement.

2. Negative results in which the data did not show that the policy had the assumed impact on the dependent variable.

However, because it is so difficult to separate the impact of several factors on a social condition, you can never have complete confidence in your findings.

Since findings may be misleading, this section is intended to help you think about alternative explanations or the results of your study. The way to do this is to create hypothetical positive and negative results and then to think of reasons why those results might have occurred in your study. Referring back to the example in the last section, positive results might look something like this:

Figure 8.8: Hypothetical Seat Belt Data: A Multiple Time-Series Study

```
DEPENDENT
VARIABLE:
Traffic Deaths
Per 100,000
                            POLICY
                 Adoption of Seat Belt Law
  55 |                         !                   O
  50 | X            X          !             O
  45 |        X     O    X     !       O                      LEGEND:
  40 | 0      O          O     !       X                       X = State A
  35 |                         !             X     X           O = State B
  30 |_________________________!________________________________
       1981  1982  1983  1984  1985  1986  1987  1988  1989
```

The results are positive because the number of traffic deaths in State A decreases after the policy implementation but they do not do so in State B. The most obvious conclusion is that the policy worked since it was implemented in State A and not State B. However, other plausible alternative explanations can be identified. One might be stricter law enforcement in State A but not State B. Another might be that tougher DWI driving laws in State A but not State B could have contributed to the trend.

A similar exercise can be performed for negative results. Instead of traffic deaths declining in State A and not State B, the results could be that conditions in State A do not improve when compared with conditions in State B. The most obvious conclusion would be that the policy did not work, but other plausible alternative explanations can be identified. Perhaps law enforcement efforts on speeding and drunk driving were reduced in State A or increased in State B. The major point about alternative explanations to negative findings is that while the conditions have not moved in the anticipated direction after the policy went into effect, they may have moved even less in that direction if the policy had not gone into effect.

It is necessary to think about the plausible alternative explanations to appreciate the limited basis for drawing a conclusion that any of these research designs can provide. Without such an appreciation, you might draw firm but unwarranted conclusions evaluating the impact of your public policy.

EXAMPLE FOR EXERCISE 8.5
Recognizing Plausible Alternative Explanations

USING THE DESIGN DEVELOPED IN EXERCISE 8.4, DRAW TWO SETS OF HYPOTHETICAL RESULTS—ONE WHERE YOU ASSUME THE POLICY WORKS AND ONE WHERE YOU ASSUME IT DOES NOT WORK. UNDER EACH, PROVIDE TWO PLAUSIBLE ALTERNATIVE EXPLANATIONS OTHER THAN THAT THE RESULTS WERE DETERMINED BY THE POLICY.

A. IN THE GRAPH BELOW, SHOW HOW THE DEPENDENT VARIABLE WILL CHANGE IF THE POLICY WORKS.

RESEARCH DESIGN: Multiple Time-Series:

DEPENDENT VARIABLE:
Emergency Room
admissions for
methaqualone
abuse per
500,000 people

POLICY: Legislation placing
methaqualone on Schedule 1
(Assumed to be implemented in
1980)

```
  |                        !                      O
28|                        !             O
25|                        !
23|                        !
21|                     X  !   O
18|                     O  !   X
15|           X            !             X
12| O         O            !                      X
 9|                        !
 6| X                      !
 3|                        !
 0|                        !
  ------------------------------------------------------
   1977      1978      1979    1980      1981      1982
```

LEGEND:
X = New York Metropolitan Region
O = Chicago Metropolitan Region

PLAUSIBLE ALTERNATIVE EXPLANATION 1:
Nationwide trend away from drug abuse.

PLAUSIBLE ALTERNATIVE EXPLANATION 2:
Cheaper and easier to get drug having same effects of methaqualone comes on the market.

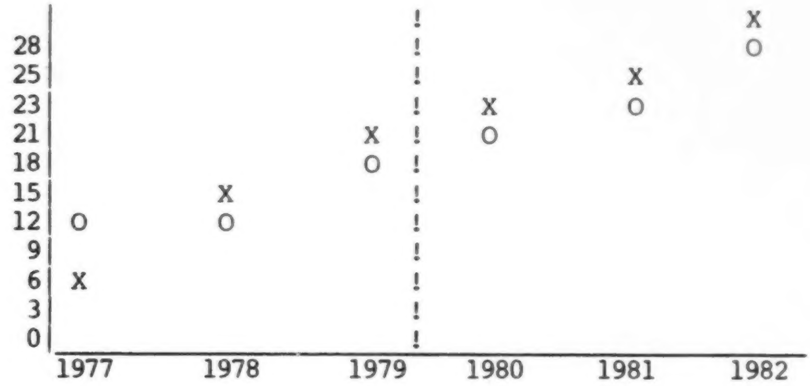
EXAMPLE FOR EXERCISE 8.5, continued
Recognize Plausible Alternative Explanations

B. IN THE GRAPH BELOW, SHOW HOW THE DEPENDENT VARIABLE WILL CHANGE IF THE POLICY DOES NOT WORK.

RESEARCH DESIGN: Multiple Time-Series:

DEPENDENT VARIABLE:
Emergency Room
admissions for
methaqualone
abuse per
500,000 people

POLICY: Legislation placing
methaqualone on Schedule 1
(Assumed to be implemented in
1980)



LEGEND:
X = New York Metropolitan Region
O = Chicago Metropolitan Region

PLAUSIBLE ALTERNATIVE EXPLANATION 1:
Better reporting of methaqualone abuse as a reason for emergency room admissions (caused by publicity generated from the adoption of the policy) might make it appear that the actual demand on medical facilities was increasing.

PLAUSIBLE ALTERNATIVE EXPLANATION 2:
Price of methaqualone drops making it cheaper and available supply increases.

EXERCISE 8.5
Recognize Plausible Alternative Explanations

USING THE DESIGN DEVELOPED IN EXERCISE 8.4, DRAW TWO SETS OF HYPOTHETICAL RESULTS WHERE YOU ASSUME THE POLICY WORKS AND ONE WHERE YOU ASSUME IT DOES NOT WORK. UNDER EACH, PROVIDE TWO PLAUSIBLE ALTERNATIVE EXPLANATIONS OTHER THAN THAT THE RESULTS WERE DETERMINED BY THE POLICY.

A. IN THE GRAPH BELOW, SHOW HOW THE DEPENDENT VARIABLE WILL CHANGE IF THE POLICY WORKS.

RESEARCH DESIGN:

DEPENDENT VARIABLE:

POLICY:

LEGEND:
X =
O =

PLAUSIBLE ALTERNATIVE EXPLANATION 1:

PLAUSIBLE ALTERNATIVE EXPLANATION 2:

EXERCISE 8.5, continued

B. IN THE GRAPH BELOW, SHOW HOW THE DEPENDENT VARIABLE WILL CHANGE IF THE POLICY DOES NOT WORK.

RESEARCH DESIGN:

DEPENDENT VARIABLE:

POLICY:

LEGEND:
X =
O =

PLAUSIBLE ALTERNATIVE EXPLANATION 1:

PLAUSIBLE ALTERNATIVE EXPLANATION 2:

SUMMARY

We have just described four research designs that can be used to evaluate a public policy. The exercises that you have completed have shown you how to set up your research to complete your evaluation. You have not really performed an evaluation. To do so would require much more time and effort than is available to you at this time. You should recognize that if you were to actually undertake the research you have designed in this chapter, you would be faced with problems in acquiring information and drawing conclusions that you are not aware of at this time. You should, however, be able to deal with those problems and provide the kind of systematic evaluation of policy that is needed in order to improve social conditions.

TABLE 8.2: REVIEW

CONCEPT	DEFINITION	TASK	EXAMPLE
Benefits and Costs	Good and bad consequences of public policies	List major benefits and costs and how you would measure each	● Reduced government expenditures ● Increased number of government officials
Dependent Variable	Social condition policy is seeking to change defined in measurable terms	Precisely define a dependent variable and what data you would collect to measure it	● Unemployment rate ● Number of automobile fatalities
Policy Variable	Policy intended to impact on the dependent variable	Precisely define variable and indicate when and where it will go into effect	● Job development programs implemented in 1980 throughout the U.S
Plausible Alternative Explanations	Factors other than the policy variable that may change the dependent variable	List as many plausible alternative explanations as you can	● Improved economic growth ● Reduction in size of population
Research Design	A plan to assess the impact of a policy	Choose from one of listed research designs and indicate how you would implement it	● Time series, yearly observations of unemployment rate from 1976-1984
Treatment	Subjects or area which receives the policy	Identify a group or area which has or will receive the policy	● New York state implements mandatory seat belt law
Control	Subjects or area which does not receive the policy	Identify a group or area that can be compared to the treatment group except that it has not or will not receive the treatment	● Any state close in road conditions to New York without policy

PART FIVE: IMPLEMENTING A PUBLIC POLICY

This section deals with the task of implementing a public policy. The section is divided into two chapters. The first covers general considerations that need to be made before one thinks about implementation. The other chapter presents a model for making a forecast and developing a strategy to get political support for the proposal.

- Chapter 9: Policy Implementation
  - Step 1: Determine Necessary Government Expenditures
  - Step 2: Determine the Legal Requirements
  - Step 3: Determine the Administrative Operations
- Chapter 10: Analyzing Politics With the Prince System
  - Step 1: Define a Policy to be Implemented
  - Step 2: Identify the Players
  - Step 3: Estimate Issue Position, Power, and Priority for Each Player
  - Step 4: Calculate the Probability of the Policy Being Accepted
  - Step 5: Develop Political Strategies to Increase the Probability of Implementation

CHAPTER 9

POLICY IMPLEMENTATION

This chapter introduces you to the basic factors you have to consider to put your prescribed policy into effect.

OBJECTIVE

Upon completion of this chapter, you should be able to identify the financial, legal, and administrative factors that will determine whether or not a policy proposal will be implemented.

INTRODUCTION

Unless the policy proposal is the continuation of existing policy, implementation is always uncertain. By implementation, we mean that the relevant government agencies will carry out the activities necessary to fulfill the policy prescription.

Policy implementation is difficult for several reasons. Except for policies that are already in existence, carrying out policy prescription requires a change in the behavior of government. Since many individuals and groups are pressuring the government to act in different ways, the odds favor the maintenance of the status quo—that is, no change in policy. To get the change required by a given proposal, a great deal of effort must be exerted.

It is always incorrect to assume that there is "no problem" in getting a new policy implemented. Change does occur at all levels of government, but it only happens as a result of a great deal of hard work. For this reason, knowledgeable players usually attempt to make a series of small changes in existing policies rather that major changes all at once.

As we shall see, the implementation of a public policy proposal requires that several critical conditions are met:

- Necessary government expenditures are provided.
- Legal requirements are met.
- Administrative operations are carried out.

In this chapter, we will describe these conditions. Political support is essential to meet these financial, legal, and administrative requirements. How to obtain the necessary political support is discussed in Chapter 10.

STEP 9.1: Determine Necessary Government Expenditures

Any given policy proposal may require the outlay of funds in any of three ways:

- Direct cash outlays (e.g., unemployment checks)
- Purchases of goods or services (e.g., building a bridge)
- Provision of government services (e.g., police surveillance to check for DWI)

After determining which of these three types of outlays, if any, are required by the public policy alternative preferred, the analyst must determine the source for funds.

Every governing body has a specific way it distributes money. In most cases, administrative organs of the government that are normally thought of as the executive branch are authorized by the legislative branch to spend money. For example, the School Board determines the size of the athletic budget, but the superintendent usually determines how much to allocate to each sport.

To determine funding requirements, it is necessary to assess who has control of the money. Is it solely in the domain of the administrators directly responsible for the policy? Are administrators above the one directly responsible involved? Is legislative approval required?

EXAMPLE FOR EXERCISE 9.1
Determine Necessary Government Expenditures

TO THE EXTENT POSSIBLE, ESTIMATE THE INCREASE IN FINANCIAL COSTS THAT WILL BE NECESSARY TO IMPLEMENT THE POLICY. BE SURE TO INCLUDE CONSIDERATIONS OF NEW PERSONNEL, OFFICE, AND EQUIPMENT EXPENSES. ALSO INDICATE THE SOURCE FOR THESE FUNDS.

The proposed policy is a complete reassessment of property taxes in the City of Syracuse. Many people feel the existing assessments are inconsistent and unfair.

A report issued by Knowledge Systems and Research, Inc. estimates the cost of full reassessment to be about $3 million. About half of this amount may be reimbursed by the state, so that the actual cost would be about $1.5 million. Continuing costs would include expenses necessary to maintain a more up-to-date assessment roll. Increased staffing would be necessary for both implementation and long-term upgrading of the Assessment Department. About six new positions will be required. The installation of new computer equipment and software will be a one-time expense, but maintenance will also be required.

EXERCISE 9.1

Determine Necessary Government Expenditures

TO THE EXTENT POSSIBLE, ESTIMATE THE INCREASE IN FINANCIAL COSTS THAT WILL BE NECESSARY TO IMPLEMENT THE POLICY. BE SURE TO INCLUDE CONSIDERATIONS OF NEW PERSONNEL, OFFICE, AND EQUIPMENT EXPENSES. ALSO INDICATE THE SOURCE OF THESE FUNDS.

STEP 9.2: Determine the Legal Requirements

In addition to the legal requirements surrounding the expenditures of funds, the laws affecting the other activities necessary for the implementation of the policy also need to be taken into account. Two different kinds of legal processes should be considered:

1. The legal framework that authorizes government actions. For example, if the policy is to increase state police surveillance of the roads for DWI, laws exist that (1) give the police authority to do so and (2) spell out the procedures the police must use.

2. The laws that directly affect people in the society. For example, laws requiring an automatic fine or suspension of a driver's license for a person convicted of DWI fall into this category.

When developing a plan to implement a policy, you must determine what legislative changes are necessary. In some cases no changes may be required in either type. In other cases, the laws directed at citizens may change but the legal framework stays the same. If a change is required, an analysis of how to change the laws must be completed.

Legislative processes always involve a legislature, an executive, and a judicial system. Legislation includes both formal laws and government agency regulations. At the federal level, you are familiar with the Congress, the President, and the Supreme Court. However, you may not realize that even at the school level, the same three types of institutions need to be considered. The School Board is the legislature, the Superintendent is the executive, and the local and state courts could be involved. The analysis of the change process at any level should focus on the legislative and the executive components.

EXAMPLE FOR EXERCISE 9.2
Determine the Legal Requirements

DISCUSS WHETHER OR NOT YOUR POLICY WILL REQUIRE A CHANGE IN LEGISLATION. BE SURE TO CONSIDER ALL THE RAMIFICATIONS OF THE POLICY IN MAKING THIS DETERMINATION. LEGISLATION MAY BE A FORMAL LAW OR AN OPERATING REGULATION OF A GOVERNMENT AGENCY.

No formal legislation would be required to undertake the reassessment itself. However, the Common Council would have to approve the necessary funding through authorizing legislation.

EXERCISE 9.2
Determine the Legal Requirements

DISCUSS WHETHER OR NOT YOUR POLICY WILL REQUIRE A CHANGE IN LEGISLATION. BE SURE TO CONSIDER ALL THE RAMIFICATIONS OF THE POLICY IN MAKING THIS DETERMINATION. LEGISLATION MAY BE A FORMAL LAW OR AN OPERATING REGULATION OF A GOVERNMENT AGENCY.

STEP 9.3: Determine the Administrative Operations

Administrative operations refer to all of the activities that government agencies undertake to implement policies. Such operations are vital in determining the effectiveness of a public policy. A policy decision to increase police surveillance of roads in order to stop DWI required a host of detailed decisions including how many police cars to add, what hours and locations to increase the surveillance, whether to use marked cars or unmarked cars, how to make the decision to stop a car that might be suspected of being driven by a drunk driver and what kind of test to use in making the decision. In fact, each one of the detailed decisions may themselves be part of the public policy prescription itself.

Even if a public policy prescription does not involve additional financial outlays or new legislation, it will still involve changes in administrative operations. Because it is easier to alter administrative operations than to get new funds authorized or get new laws passed, changes in administrative operations are frequently the easiest policy prescriptions to implement. If the policy prescription requires the outlay of new funds or the passing of new laws, changes in administrative operations are certain to be needed.

EXAMPLE FOR EXERCISE 9.3
Determine the Administrative Operations

DISCUSS NEW ADMINISTRATIVE OPERATIONS THAT MAY BE NEEDED AS A RESULT OF THE IMPLEMENTATION OF YOUR POLICY.

The implementation of the policy will require (1) increased staffing, (2) staff training, (3) printing materials for the purpose of increasing the public awareness, and (4) the actual process of updating the city's assessment rolls.

EXERCISE 9.3
Determine the Administrative Operations

DISCUSS NEW ADMINISTRATIVE OPERATIONS THAT MAY BE NEEDED AS A RESULT OF THE IMPLEMENTATION OF YOUR POLICY.

SUMMARY

We have briefly reviewed the crucial aspects that one must consider in implementing a public policy. Financial, legal, and administrative considerations play a role in all public policies, but any given proposal may require more changes in one of the areas than the other two. It is important to consider all three areas, however, in order to plan a strategy that will lead to the implementation of the policy. In the next chapter, we will discuss how that strategy can be developed.

TABLE 9.1: REVIEW

CONCEPT	DEFINITION	TASK	EXAMPLE
Policy Implementation	Putting the proposed policy into operation	Identify the financial, legal, and administrative requirements needed to put policy into operation	● Establishing the 21-year old drinking age requires legislation
Source of Funding	Agency that has the authority to spend money required	Identify the type of funding needed and how it will be obtained	● Increased police surveillance to enforce DWI laws requires funds for more police. Funds are authorized by legislature and budget agencies
Legal Requirements	Laws that must be passed in order to implement policy	Identify what laws are needed to implement policy and how those laws will be passed	● Congress must pass and the President must sign (or Congress must override his veto) for a bill to become a law
Administrative Operations	Activities of government officials required to implement the law	Identify the activities of government officials	● More police must be allocated to enforce stricter DWI laws

CHAPTER 10

ANALYZE POLITICS WITH THE PRINCE SYSTEM

This chapter provides you with a system for (1) estimating the likelihood that a policy will receive the necessary support for its implementation and (2) developing strategies to increase that likelihood of support.

OBJECTIVE

Upon completion of this chapter, you should be able to use a system to identify key players; their issue position, power, and priority on the policy proposal; the likelihood of the policy being implemented; and strategies to increase that likelihood.

INTRODUCTION

As noted in the previous chapter, good public policy ideas do not become policies unless they are implemented. The previous chapter also listed the financial, legislative, and administrative requirements for policy implementation. These requirements can only be met if there is sufficient political support for a policy. A method for achieving this vital task is "the Prince System."

The Prince System was developed by the authors and named after Machiavelli's famous book The Prince. It is a technique for assessing the relative support and opposition of various individuals, groups, and organizations for a public policy decision. The Prince System requires you to do the following:

1. Identify the players likely to have a direct or indirect impact on the decision. This includes those with a formal role in the making or blocking of the decision. It also means including those who can make it either easier or harder to carry out a decision after it is made.

2. Determine whether each player supports, opposes, or is neutral toward the decision. This is called "issue position."

3. Determine how effective each player is in blocking the decision, helping make it happen, or effecting the implementation of a decision. This is called "power."

4. Determine how important the decision is to each player. This is called "priority."

When making decisions, key individuals — the President, a legislator, a regional governmental official, a business executive, a school superintendent, or the head of the household — always perform these kinds of analyses, if only informally.

STEP 10.1: Define a Policy to be Implemented

Your first step is to clearly define the public policy you wish to see implemented. It may be a local ordinance, a national policy decision, or a foreign policy action. The Prince System can be applied when the proposed decision is clearly defined in specific terms, in a phrase beginning with a verb. If a decision is defined as "protecting the environment" or "improving the efficiency of an agency's regulatory procedure," it would not be possible to complete a Prince Analysis. But the analysis can be done on a specific decision such as "issue a general regulation controlling the landfill activities of private landowners." The key is found in the verb used to phrase the decision. Verbs such as "protect" or "improve" are undesirable because they do not adequately specify the required action. Verbs like "restrict," "vote," "permit," or "build" are much more useful.

Although decisions or actions need to be specifically defined in order to conduct the analysis, trying to guess at the exact detail of the final formulation is not required. One of the main characteristics of reaching decisions affecting many players is that the action is frequently redefined and modified as a result of the process for reaching a decision. The decision may begin as "adopt a general regulation that governs landfill activities of private landowners" and become modified to "adopt a general regulation that governs landfill activities of private landowners and owners of commercial property under a certain acreage." Such a change may be required to obtain the support of important groups to solve technical problems in administering the permit. The Prince System can be applied to any number of proposed decisions (including redefinitions and modifications) as long as it is clear what specific action is involved at each point along the way.

Another important consideration in picking a decision is to make sure that there is both significant support and opposition. It is pointless to analyze a decision that is either so well accepted or so widely opposed that the outcome is obvious. If fact, few decisions affecting the public result in overwhelming support or opposition. However, when they do come along, they do not need to be analyzed systematically.

EXAMPLE FOR EXERCISE 10.1
Define a Policy To Be Implemented

A. BRIEFLY DESCRIBE THE POLICY YOU WANT TO IMPLEMENT. START WITH A VERB AND INCLUDE THE UNIT OF GOVERNMENT INVOLVED.

Reassess all private property tax assessments in the city of Syracuse. This policy will be undertaken by the Syracuse Department of Taxation

B. INDICATE BRIEFLY THE FINANCIAL, LEGAL, AND ADMINISTRATIVE REQUIREMENTS FOR THE PROPOSED POLICY.

The policy will involve a substantial allocation of funds from the city budget, additional staff, and money for new publications to inform taxpayers. No new legislation will be required other than authorization of funds by the City Council.

EXERCISE 10.1
Define a Policy To Be Implemented

A. BRIEFLY DESCRIBE THE POLICY YOU WANT TO IMPLEMENT. START WITH A VERB AND INCLUDE THE UNIT OF GOVERNMENT INVOLVED.

B. INDICATE BRIEFLY THE FINANCIAL, LEGAL, AND ADMINISTRATIVE REQUIREMENTS FOR THE PROPOSED POLICY.

STEP 10.2: Identify the Players

Reasons for including a player are any of the following: The player has substantial legal authority; the player has political influence to promote or obstruct the decision; or the player will be seriously affected by the decision and may either help or hinder its implementation, even though having little say in the actual making of the decision.

Identifying the players to be considered is one of the most important steps in the Prince System. Omitting an important player or incorrectly grouping players can distort the analysis so much that it becomes useless.

A key to identifying the correct players is to refer to the analysis done in Chapter 9 where you examined the financial costs, the legislative requirements, and the administrative operations that were suggested by your policy proposal. If the primary change of the proposal is to put more money into existing programs or somehow allocate funds differently, the players to consider will be those who have authority over the budget. If the policy requires revised or new legislation, the players would be the chief executive and the legislature. If the policy requires neither new funds nor new legislation, the players will be the bureaucracies responsible for the policy and those who influence those bureaucracy most heavily (who may or may not be legislators). In addition to government officials in the executive and legislative branch, do not forget players representing key interest groups.

In order to keep the analysis within feasible bounds, limit the number of players to 20 — or even less, if possible. In situations where time is short, try to limit the number to 10 or less. The reason for limiting the number of players is to limit the time required to make the lists and perform the calculations required for the Prince System.

The principal way to limit the number of players is to group individuals and organizations into collective players for the purpose of analysis. The process of grouping frequently appears arbitrary and, as mentioned earlier, can seriously bias the results if it is not done carefully. However, there are some guidelines that help assist in grouping players to help improve the accuracy of the analysis:

- Group together players that have the same economic interests. In dealing with an environmental issue, for example, all private developers might be grouped together for this reason.

- Do not group together players that have veto power. This especially holds for governmental players. For example, the U.S. Fish and Wildlife Service should be kept separate from the Environmental Protection Agency.

- Do not group together players if there is disagreement among them or if their components have widely unequal power. For example, a members of a city government could be combined as a single player if there were general agreement among all members of the government concerning the issue and if each person in the governing unit had approximately equal power. If there were disagreements, or if some members were much more powerful that others, it would be preferable to divide them into two (or more) players.

- Select a configuration of players that taken together constitutes a reasonable picture of the overall power distribution. Do not include an excess of players that gives one side an unrealistic weighting. If there is one collective player with an immense amount of power, that player should be divided into enough smaller players so that the total power configuration is accurately reflected. For example, in dealing with the executive branch, you might want to distinguish between the President and the Cabinet.

These guidelines are admittedly quite general. Your judgment in conducting the analysis is vital at every step. In one sense, this might be viewed as a weakness in the technique, but not really. The system is a way of organizing and guiding judgment, not eliminating it. It would be foolish to ignore the importance of judgment and balanced insight (even if it were possible to do so) in the selection of players as well as in the other aspects of Prince analysis.

EXAMPLE FOR EXERCISE 10.2
Identify the Players

LIST AT LEAST FIVE PLAYERS AND INDICATE WHY THEY HAVE BEEN INCLUDED IN YOUR LIST. THE TOTAL SET OF PLAYERS SHOULD FAIRLY REPRESENT THE RANGE OF SUPPORT AND OPPOSITION TO THE PROPOSAL.

1. PLAYER: Assessment Commissioner

   REASON: He will be responsible for implementing the policy since he is in charge of the office to carry out the new assessment.

2. PLAYER: Mayor

   REASON: As Mayor, he can veto the legislation and expenditures necessary to implement the policy

3. PLAYER: Common Council

   REASON: The Common Council has the authority to allocate funds and change the laws required in the proposal.

4. PLAYER: Syracuse United Neighbors (SUN)

   REASON: A neighborhood organization whose media campaign raised the issue in the first place.

5. PLAYER: New York State Division of Tax Equalization and Assessment

   REASON: This state organization provides guidance and funds to local communities to carry out comprehensive reassessments.

EXERCISE 10.2
Identify the players

LIST AT LEAST FIVE PLAYERS AND INDICATE WHY THEY HAVE BEEN INCLUDED IN YOUR LIST. THE TOTAL SET OF PLAYERS SHOULD FAIRLY REPRESENT THE RANGE OF SUPPORT AND OPPOSITION TO THE PROPOSAL.

1. PLAYER:

   REASON:

2. PLAYER:

   REASON:

3. PLAYER:

   REASON:

4. PLAYER:

   REASON:

5. PLAYER:

   REASON:

STEP 10.3: Estimate Issue Position, Power, and Priority for Each Player

Issue Position is the current general attitude of the player toward the decision. It is expressed as a number ranging from +5 to -5 to indicate whether or not the player supports the decision (+5, +4, +3, +2, or +1), is neutral toward it (0), or opposes it (-1, -2, -3, -4, or -5). A "+5" is assigned if the player is firmly in favor of the issue and is unlikely to change; a "+4," "+3," "+2," or "+1" indicate lower levels of firmness of the player's support. Similarly, a "-5" indicates firm opposition while a "-4," "-3," "-2," or "-1" indicate lower degrees of softness in the opposition.

Power is defined as the degree to which the player can exert influence, directly or indirectly, in support of or in opposition to the decision, relative to all other players. The basis of a player's power as well as the ways in which this power may be exercised are varied. Power may be based on such factors as group size, wealth, physical resources, institutional authority, prestige, and political skill. Power is expressed as a number ranging from 1 to 5. A "1" is assigned if the player has a slight amount of power; a "2" if the player has more than minimum power; a "3" or "4" if the player has substantial power; a "5" is assigned if the player can veto or prevent the implementation of the decision.

Priority is defined as the importance the player attaches to supporting or opposing the decision relative to all other decisions with which that player is concerned. Priority is expressed as a number ranging from 1 to 5. A "1" indicates slight interest or concern for the issue regardless of the player's issue position and power. A "2" is assigned for those players with some concern while a "3" and "4" indicate substantial concern. A "5" is reserved for those players that assign the highest priority to the issue.

The task of estimating each player's issue position, power, and priority can be facilitated by following these suggestions.

When estimating a player's issue position:

- Read and listen to what the player says about the issue.

- Deduce from the player's economic, social, or political standing what the player's position is likely to be on the basis of self-interest.

- Weigh the implications of tangible interests against what the player has said. When in doubt, use tangible interests for your estimate over mere verbalizations.

- Look for differences among individuals and factions within a collective player. Look for inconsistencies in statements by an individual player. If the contrasting positions seem evenly balanced, assign a "0" (neutral) issue position. If there seems a slight positive or negative balance toward the issue, assign a "+1" or "-1" for the player's issue position.

When estimating a player's power:

- Ask if the player has the resources either to block or implement the policy.
- Determine if legal authority is a consideration and if the player possesses a large share of the authority.
- Consider whether a player has the ability to help or hinder the carrying out of a decision. This is why constituency groups have power.
- If wealth is a consideration, determine how much wealth the player has.
- Do not assume that a player powerful on one set of issues is necessarily powerful on all issues. It is true that having high power on one issue may mean having power on other issues, but this is not assured.
- Consider the allies and enemies of the player. Powerful allies make the player powerful; powerful enemies diminish the player's power.

When estimating priority:

- Determine the frequency and intensity with which the player makes public statements about the decision.
- Deduce from the player's social, political, and economic interests the importance the player is likely to attach to the decision.
- Watch out for the fact that priority can be rapidly and substantially altered by external events and the intrusion of other issues.
- Remember that other decisions and factors compete for the player's attention and, hence, priority.

Like selecting players, the assignment of issue position, power, and priority is something of an art. Systematic research can play an important role, but the importance of the skillful assessment of existing conditions by knowledgeable and sensible observers is absolutely essential. Therefore, you have to be thoroughly familiar with the situation to complete the charts. You should talk to other knowledgeable people and gather all available information on the reactions of individuals, groups, and organizations to the proposed decision.

EXAMPLE FOR EXERCISE 10.3
Estimate Issue Position, Power, and Priority

(A) USING THE POLICY AND PLAYERS DEVELOPED FOR EXERCISES 10.1 AND 10.2, PLACE ESTIMATES OF THE ISSUE POSITION, POWER, AND PRIORITY FOR EACH PLAYER IN THE PRINCE CHART BELOW. (DO NOT CALCULATE THE PLAYER'S PRINCE SCORE AT THIS TIME.

POLICY: Reassess all property tax assessments in Syracuse
(STATE IN TERMS OF A DESIRED POLITICAL OUTCOME USING A PHRASE BEGINNING WITH A VERB.)

PLAYERS	ISSUE POSITION	X	POWER	X	PRIORITY	=	(CALCULATION 1) PLAYER'S PRINCE SCORE
	-5 0 +5		1-5		1-5		
Assessment Commissioner	0	X	3	X	5	=	
Mayor	-1	X	5	X	1	=	
Common Council	-2	X	5	X	3	=	
Syracuse United Neighbors	+5	X	1	X	5	=	
N.Y. St. Div. of Tax Equalization and Assessment	+3	X	2	X	2	=	
		X		X		=	

EXAMPLE FOR EXERCISE 10.3, continued

B. PROVIDE JUSTIFICATIONS AND EVIDENCE FOR THE VALUES ASSIGNED FOR EACH PLAYER. (USE ANOTHER PAGE, IF NECESSARY.)

The Assessment Commissioner has said that he is in favor of reassessment, but is also reported to have advised the Mayor not to undertake reassessment in the near future for political reasons. He is judged to be a "0" given this information. He has no authority to implement a reassessment on his own but is highly influential in the Mayor's orientation to the issue and, therefore, has been assigned a "3" for power. Because the reassessment would have a major impact on his job, he has been assigned a priority of "5."

The Mayor is a "-1" on issue position at this time. He has made no public pronouncements on the subject and will probably not until after the next elections. At that time, he could decide to support the reassessment in the hope of reducing taxes for some of his support groups. But right now he is against the program. He has "5" for power because he has the authority to stop any comprehensive reassessment plan. At this point, he has a "1" priority because the issue has not received much media attention currently.

The Common Council is split on the issue. Several of the more powerful figures on the Common Council, including the President and the Chairperson of the Committee on Assessment favor a reassessment. However, the fear that the reassessment will lead to higher taxes for many of the other member's constituents have made the majority of members oppose the issue. A "-2" is assigned to show that the balance of the group is against the proposal. The Common Council has a "5" on power because it could withhold funds and other support for the program. Its priority is now a "3" because some constituents have voiced views on both sides of the issue.

The Syracuse United Neighbors (SUN) has a firm position in favor of the reassessment and, therefore, is assigned a "+5." It has actively supported the proposal in the press and in conversations with politicians which also indicates that it is a high priority issue and, therefore, will be assigned a "5." Its power is very limited, however, since it is an organization that does not have a broad base of support in the community and could not do a great deal to influence elections. It has been given "1" on power.

The New York State Division of Tax Equalization and Assessment has a mandate to insure that tax assessments are fairly assigned. It is assigned an issue position of "+3" because it would favor a comprehensive reassessment as proposed for Syracuse especially since one has not been done for more than 50 years. It is not assigned a "+5" because it will wait for the local government to initiate a reassessment before fully committing itself in favor. Since it can provide only limited funding to assist in the program, it has little influence in whether or not the decision would be made in Syracuse. Therefore, we have assigned it a "2" for power. Its priority is low also since it has similar aims for hundreds of communities throughout the state. Syracuse is bigger than most communities which leads us to assign a "2" for priority rather than a "1."

EXERCISE 10.3
Estimate Issue Position, Power, and Priority

(A) USING THE POLICY AND PLAYERS DEVELOPED FOR EXERCISES 10.1 AND 10.2, PLACE ESTIMATES OF THE ISSUE POSITION, POWER, AND PRIORITY FOR EACH PLAYER IN THE PRINCE CHART BELOW. (DO NOT CALCULATE THE PLAYER'S PRINCE SCORE AT THIS TIME.

POLICY: ____

(STATE IN TERMS OF A DESIRED POLITICAL OUTCOME USING A PHRASE BEGINNING WITH A VERB.)

PLAYERS	ISSUE POSITION	X	POWER	X	PRIORITY	=	(CALCULATION 1) PLAYER'S PRINCE SCORE
	-5 0 +5		1-5		1-5		
		X		X		=	
		X		X		=	
		X		X		=	
		X		X		=	
		X		X		=	
		X		X		=	

EXERCISE 10.3, continued

B. PROVIDE JUSTIFICATIONS AND EVIDENCE FOR THE VALUES ASSIGNED FOR EACH PLAYER. (USE ANOTHER PAGE, IF NECESSARY.)

STEP 10.4: Calculate the Probability of the Policy Being Accepted

After the estimates of issue position, power, and priority are made for each player, you can determine the probability of the decision by completing the following calculations. Refer to Table 10.1 as read the directions below.

TABLE 10.1: Prince Chart

POLICY: Maintain the Same Tuition Cost from Current Academic Year to Next Academic Year.
(STATE IN TERMS OF A DESIRED POLITICAL OUTCOME USING A PHRASE BEGINNING WITH A VERB.)

PLAYERS	ISSUE POSITION -5 0 +5	X	POWER 1-5	X	PRIORITY 1-5	=	(CALCULATION 1) PLAYER'S PRINCE SCOPE
Administration	-2	X	3	X	3	=	-18
Board of Trustees	0	X	2	X	2	=	(4)
SA/Students in Senate	+3	X	1	X	2	=	+6
Faculty in Senate	-2	X	3	X	2	=	-12
Parents Office	+2	X	2	X	1	=	+4
Budget Committee	-2	X	1	X	3	=	-6

CALCULATION 2: Sum of all positive scores plus 1/2 neutral scores = +12

CALCULATION 3: Sum of all scores ignoring signs and parentheses = 50

CALCULATION 4: Probability of support = Calculation 2 divided by Calculation 3 = $\frac{12}{50}$ = .24 (24%)

Calculation 1: Issue Position Times Power Times Priority = Prince Score
Multiply issue position, power, and priority for each player to determine the player's Prince Score. For example, the Administration in Table 10.1 has an issue position of "-2", a power of "3", and a priority of "3." The product of these three numbers is "-18." If the issue position is 0, multiply just the power and priority to determine the player's Prince Score, and put a parenthesis around the score. For example, the Board of Trustees has a "0" issue position, a power of "2," and priority of "2," leading a Prince Score of (4).

Calculation 2: Sum of All Positive Scores Plus 1/2 Neutral Scores
Find the sum of all positive Prince Scores plus 1/2 the sum of all Prince Scores that are enclosed in parentheses (the neutral scores).

In this case, the sum of all positive Prince Scores is "10" (SA/Students in Senate are "+6" and Parents in Office is "+4"). The neutral score is "4" for the Board of Trustees. Add 1/2 of 4, or 2, to the 10 for a total of 12 for this calculation.

Calculation 3: Sum of All Scores Ignoring Signs and Parentheses

Add all the Prince Scores ignoring both the + and - signs (absolute value) and the parentheses. In this case, the total is 50 (10 for the positive scores, 4 for the neutral scores, and 36 for the negative scores).

Calculation 4: Probability of Support = Calculation 2 Divided by Calculation 3

Divide the number you found in Calculation 2 by the number you found in Calculation 3. In this case, it would be 12 divided by 50 which equals .24 or 24%. The calculation of the probability for the policy analyzed in the Prince Chart in Table 10.1 indicates that there is 24% chance that tuition rates will not increase. In other words, this forecast indicates that the chances are quite small that the rates will stay the same.

You should note that this analysis could have been prepared by having the issue stated as "Raise tuition rates for the forthcoming year." In this case, the signs of the issue positions would be reversed. The resulting calculations would have been based on a total of 36 points for those supporting an increase, plus 2 points for the neutral board of trustees, for a total of 38 divided by 50, for a probability of 76% that the increase would take place. Saying that there is only a 24% chance that no increase will occur is the same as saying that there is a 76% chance that an increase will occur. (Incidently, the increase did occur, confirming the unhappy prediction.) It is a matter of convenience whether the issue is stated as affirmatively, making an action occur, or negatively, preventing an action from occurring.

EXAMPLE FOR EXERCISE 10.4
Calculate the Probability

USING THE PRINCE CHART YOU COMPLETED IN EXERCISE 10.3, FIRST CALCULATE THE PRINCE SCORES (CALCULATION 1). THEN CALCULATE THE PROBABILITY (CALCULATIONS 2, 3, AND 4) AND WRITE A BRIEF INTERPRETATION OF IT.

A. CALCULATION OF PROBABILITY

CALCULATION 2. SUM OF ALL POSITIVE SCORES PLUS 1/2 NEUTRAL SCORES = 44.5

CALCULATION 3. SUM OF ALL SCORES IGNORING SIGNS AND PARENTHESES = 87

CALCULATION 4. PROBABILITY OF SUPPORT = CALCULATION 2 DIVIDED BY CALCULATION 3 = $\frac{44.5}{87}$ = .51 (51%)

B. INTERPRETATION OF PROBABILITY:

There is a 51% chance that the policy will be implemented. Since the number is so close to 50%, the most likely forecast is that this policy will continue to be a topic of controversy without being resolved one way or the other.

EXERCISE 10.4
Calculate the Probability

USING THE PRINCE CHART YOU COMPLETED IN EXERCISE 10.3, FIRST CALCULATE THE PRINCE SCORES (CALCULATION 1). THEN CALCULATE THE PROBABILITY (CALCULATIONS 2, 3, AND 4) AND WRITE A BRIEF INTERPRETATION OF IT.

A. CALCULATION OF PROBABILITY

CALCULATION 2. SUM OF ALL POSITIVE SCORES PLUS 1/2 NEUTRAL SCORES =

CALCULATION 3. SUM OF ALL SCORES IGNORING SIGNS AND PARENTHESES =

CALCULATION 4. PROBABILITY OF SUPPORT = CALCULATION 2 DIVIDED BY CALCULATION 3 =

B. INTERPRETATION OF PROBABILITY:

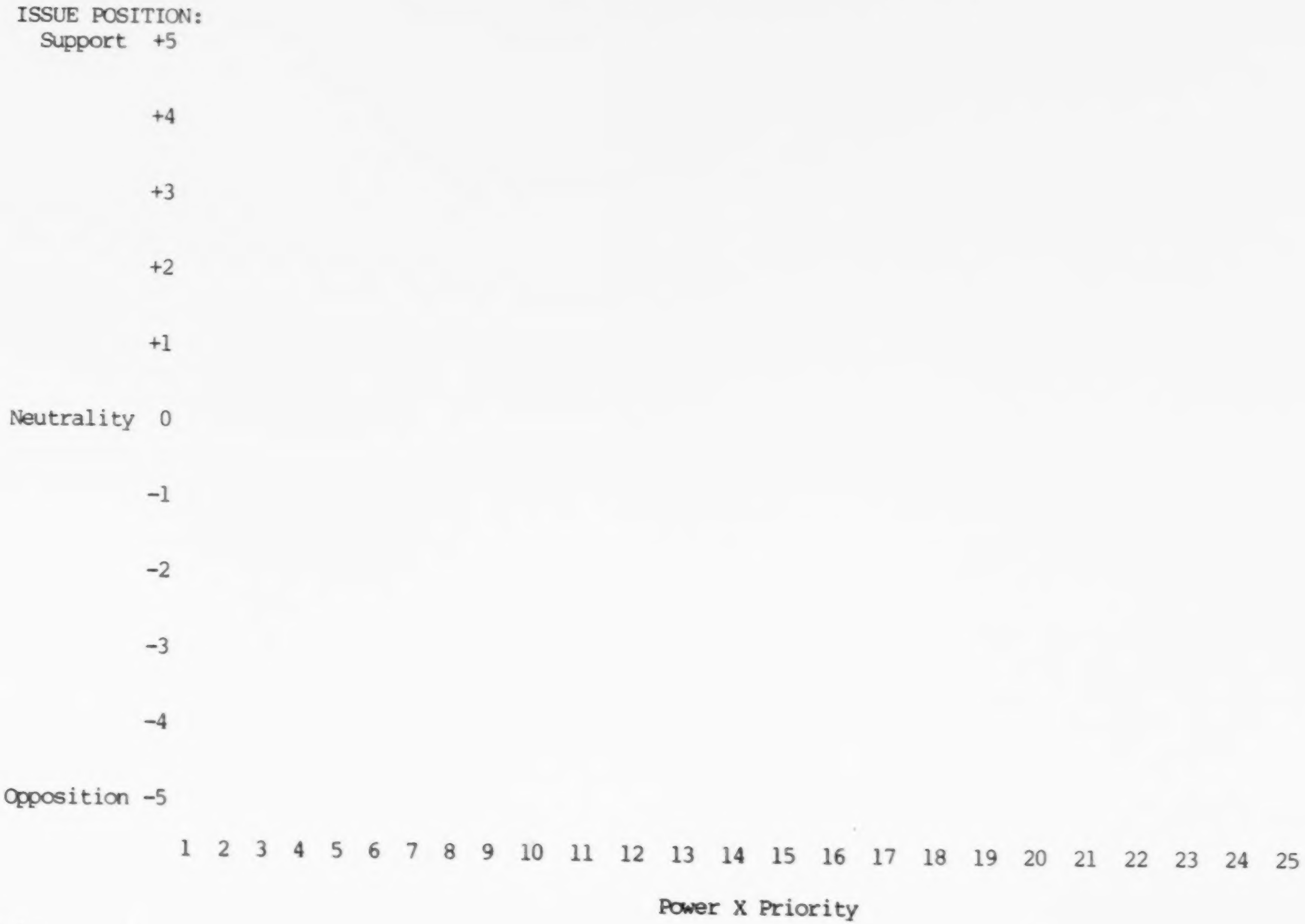
STEP 10.5: Develop Political Strategies to Increase the Probability of Implementation

One of the prime values of the Prince System is that it enables you to formulate on a systematic basis strategies that you might want to pursue to achieve a political outcome. In order to use the system to develop strategies, the first thing that you must decide is what political outcome you would like to achieve.

Ask yourself, in terms of the probability estimate generated by your analysis, do you want a higher or lower probability? Once you have decided that question, you need to take the role of one of the players in the Prince chart or to take a role that you can visualize would allow you to influence players in the Prince chart.

After making a decision on what your political goal is and whom you will represent, you need to develop a strategy to achieve that goal. A strategy is a course of action that you can implement to increase the probability of the decision in the direction you wish. Once you have created the Prince chart and calculated the probability, the first step in developing a strategy is to complete a Prince Political map. An example of a Prince Political Map appears in Figure 10.1 on the next page. It is a display of the information you have in the Prince chart so that you can see where you would like players to be in order to achieve your goal. Location on the vertical axis is determined by the player's issue position and on the horizontal axis by the product of power multiplied by priority.

Figure 10.1: Prince Political Map



If your goal is to increase the probability of the policy, you will want to move as many players as possible to the upper right-hand corner of the map. If your goal is to reduce the probability, your goal is to move as many players as possible into the lower left-hand corner of the map. If, as may occur on rare occasions, your goal is to keep the issue alive with no resolution, your goal is to have players equally divided around "0" on the horizontal axis.

Since we are talking basically about moving players around on the Prince Political Map, four basic strategy, goals are available:

- Add new players who will occupy the position we want on the map or delete players who now occupy the wrong positions on the map.
- Change the issue positions of players
- Change the power of players
- Change the priority of players

We cannot provide a detailed discussion of the dynamics of each of these different kinds of strategies here. However we can provide some basic guidelines. A more complete discussion is available in William D. Coplin and Michael K. O'Leary with Carole Gould, Power Persuasion (Reading, Massachusetts; Addison-Wesley Publishing Company, 1985).

In planning your strategic action, it is important to distinguish between strategy goals and the strategies to achieve those goals. The goals below include various changes that will alter probability the way you want. The strategies are the specific actions you decide to take to achieve your goals. For example, a goal might be to raise priority. The strategy to achieve that goal might be to issue a statement to the news agencies appropriate to your particular situation.

1. Add new players or delete existing players

This strategy goal can radically alter the probability of a decision, but it is very difficult to implement. For any public policy issue, those players in the game are not likely to leave except in the case of politicians losing elections or individuals for reasons of health or personal reasons dropping out of the process. It is also time-consuming and unlikely that new players will be added at least in a short period of time. New players might be elected or induced to participate in the process or new organizations might appear.

2. Change the issue position of players

This strategy goal is the most frequently sought although its effectiveness depends on the power and skill of the player using it and the attitudes of the target players. There are four basic ways to change a player's issue position:

- Make promises to do something in exchange for a shift in issue position.

- Redefine the policy to accommodate the interests of those opposed without giving up the essential ingredients of what you want. This is usually called compromise.

- Make threats to do something unpleasant if the player does not shift position.

- Make arguments that use facts and symbols to change the player's mind.

The four ways are listed in the order of general effectiveness. Promises and compromise are less costly to the player pursuing the strategy than threats. Arguments are made by all players all of the time, and although a necessary ingredient to any strategy, they seldom work by themselves. Threats are costly because they can backfire by motivating the player to stick to the player's own position even more firmly. Threats, therefore, should be used only as a last resort.

One final point, the firmer a player's issue position, the more difficult it is to move that player. If the player is on your side, that's good. If the player is on the opposite side, firmness is a measure of how difficult it will be to get your strategy to work. The problem is compounded by the fact that if you move a player who is -5 to a +1, the payoff in altered probability is much greater than if you move a -1 player to a +1. However, it is easier to move the -1 player to a +1. You should choose a strategy where you are most likely to get the biggest payoff.

3. Change the power of yourself and other players.

Power comes from a variety of sources, including

- Appointed or elected position in the policy-making process

- Wealth

- Organizational size and cohesion

- Reputation for knowledge

- Number and importance of friends and enemies

To enhance or diminish the power of the player you choose or that of other players you oppose takes a long period of time and a great deal of work. However, there may be no other choice. Remember, you want to decrease the power of those that oppose your position and increase the power of those that support you. Also, remember you get maximum results from power strategies if you direct them at players with firm positions and high priority.

4. Change the priority of other players.

Priority strategies fall into two categories:

- Trying to raise priority by creating events that generate publicity or distribute information on the issue.

- Trying to lower priority by keeping the issue quiet or generating other issues that take your issue out of the spotlight.

Uninitiated players frequently think that there is no such thing as bad publicity. They feel that if only the priority of all players could be raised, they would get their way. You have to look carefully at a Prince Map, however, to determine if that is in fact the case. If your opponents have high priority and those who support you have lower priority, raising priority is good. However, if your supporters already have high priority and your opponents don't, raising priority will hurt you. In fact, in this last instance, your strategy goal should be to lower priority among players.

To formulate an effective political strategy once you have decided on the player you wish to represent, you should examine the Prince Political Map and decide which players you wish to work on. You should consider the four types of strategy goals just presented, and select the ones that have the highest likelihood of getting the probability to move in the direction you want. Then you need to make sure that the player you represent can actually carry out the actions to achieve the strategy goals. Spell out the specific steps that might be taken to execute the selected strategy.

Once you have done all of that, you are ready to evaluate the impact of the strategy. You do this by drawing arrows on the Prince Political Map that indicate how the players are likely to move given the strategy. Make sure that you assess the impact on all players and give reasons why there is or is not an impact. You may direct a strategy at one player, but it may have an effect on the behavior of another player. A final step in the analysis is to prepare a new Prince chart that encompasses the effects of the strategy as depicted in the map.

EXAMPLE FOR EXERCISE 10.5
Develop Political Strategies

COMPLETE SECTIONS A-C TO IDENTIFY POLITICAL STRATEGIES AND TO ASSESS THEIR IMPACT ACCORDING TO THE PRINCE SYSTEM.

A. CHOOSE THE ROLE OF ONE OF THE PLAYERS FROM THE PRINCE CHART COMPLETED IN EXERCISE 10.1. IDENTIFY THE PLAYER YOU REPRESENT. DISCUSS A STRATEGY THAT MIGHT BE PURSUED BY THIS PLAYER TO STRENGTHEN THE OUTCOME THE PLAYER FAVORS (EITHER INCREASED OR DECREASED SUPPORT FOR THE PUBLIC POLICY). STATE WHAT SPECIFIC ACTION(S) THE PLAYER WILL TAKE AND ITS IMPACT ON THE ISSUE POSITION, POWER, AND PRIORITY OF ALL THE PLAYERS IN THE CHART.

I will represent SUN and attempt to improve the chances of the policy being implemented by privately lobbying council members to change their position. Each of those council members now supporting the proposal will be visited and offered support in the upcoming election. Those now opposed to the policy will also be visited and be warned that SUN will support opposing candidates if the member does not shift his or her position. One strategy goal is to keep priority low. We will keep a low profile in making the approach because Council members will change only if they think that they will gain more than they lose. If opponents to the proposal become aware of the campaign they would increase their lobbying activities and counteract the effect of the proposed strategies. For this reason, we will not approach the Mayor because he might increase the publicity on the issue and create more opposing pressure on the Council.

If the strategy works, the best that we could expect is to neutralize the vote of the Common Council. No other player would be effected by the strategy if we are successful in keeping the pressure low key.

EXAMPLE FOR EXERCISE 10.5, continued

B. COMPLETE A NEW PRINCE CHART (INCLUDE CHANGED VALUES AND NEW INTERPRETATION. REMEMBER TO STATE THE POLICY USING A PHRASE BEGINNING WITH A VERB.)

POLICY: Reassess all property tax assessments in Syracuse
(STATE IN TERMS OF A DESIRED POLITICAL OUTCOME USING A PHRASE BEGINNING WITH A VERB.)

PLAYERS	ISSUE POSITION	X	POWER	X	PRIORITY	=	(CALCULATION 1) PLAYER'S PRINCE SCORE
	-5 0 +5		1-5		1-5		
Assessment Commissioner	0	X	3	X	5	=	(15)
Mayor	-1	X	5	X	1	=	- 5
Common Council	–0	X	5	X	3	=	(15)
Syracuse United Neighbors	+5	X	1	X	5	=	+ 5
N.Y. St. Div. of Tax Equalization and Assessment	+3	X	2	X	2	=	+12
		X		X		=	

CALCULATION OF PROBABILITY:

CALCULATION 2. SUM OF ALL POSITIVE SCORES PLUS 1/2 NEUTRAL SCORES = 32
CALCULATION 3. SUM OF ALL SCORES IGNORING SIGNS AND PARENTHESES = 52
CALCULATION 4. PROBABILITY OF SUPPORT = CALCULATION 2 DIVIDED BY

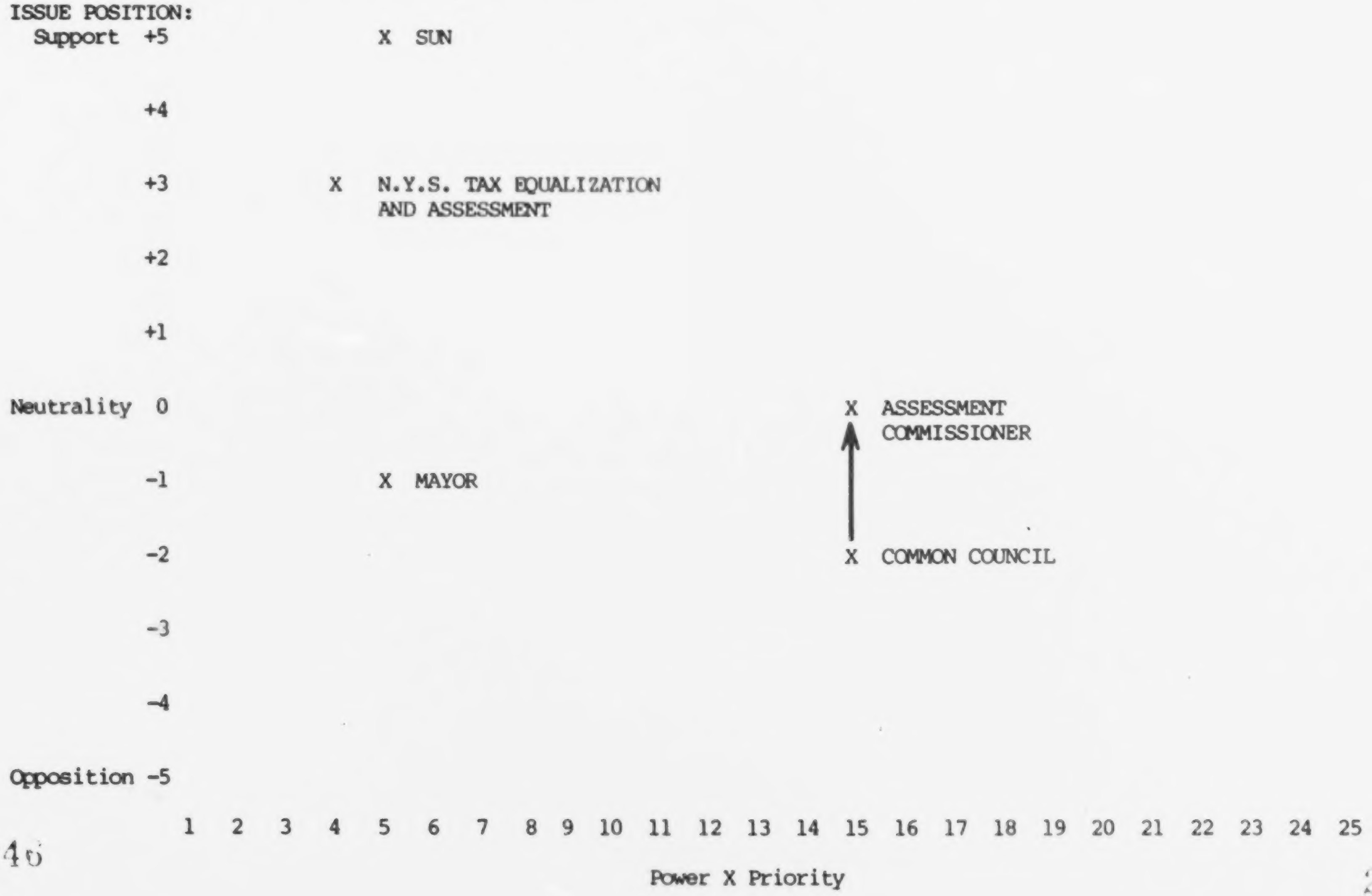
$$\text{CALCULATION 3} = \frac{32}{52} = .62\ (62\%)$$

EXAMPLE FOR EXERCISE 10.5, continued

INTERPRETATION OF PROBABILITY:
The strategy will increase the probability from 51% to 62%

EXAMPLE FOR EXERCISE 10.5, Continued

C. CONSTRUCT A PRINCE POLITICAL MAP AND DRAW ARROWS SHOWING HOW PLAYERS WILL MOVE FROM THEIR ORIGINAL LOCATION TO THEIR NEW LOCATION ON THE MAP AS A RESULT OF YOUR STRATEGY.



EXERCISE 10.5
Develop Political Strategies

COMPLETE SECTIONS A-C TO IDENTIFY POLITICAL STRATEGIES AND TO ASSESS THEIR IMPACT ACCORDING TO THE PRINCE SYSTEM.

A. CHOOSE THE ROLE OF ONE OF THE PLAYERS FROM THE PRINCE CHART COMPLETED IN EXERCISE 10.1. IDENTIFY THE PLAYER YOU REPRESENT. DISCUSS A STRATEGY THAT MIGHT BE PURSUED BY THIS PLAYER TO STRENGTHEN THE OUTCOME THE PLAYER FAVORS (EITHER INCREASED OR DECREASED SUPPORT FOR THE PUBLIC POLICY). STATE WHAT SPECIFIC ACTION(S) THE PLAYER WILL TAKE AND ITS IMPACT ON THE ISSUE POSITION, POWER, AND PRIORITY OF ALL THE PLAYERS IN THE CHART.

EXERCISE 10.5, Continued

B. COMPLETE A NEW PRINCE CHART (INCLUDE CHANGED VALUES AND NEW INTERPRETATION. REMEMBER TO STATE THE POLICY USING A PHRASE BEGINNING WITH A VERB.)

POLICY: ______________________________

(STATE IN TERMS OF A DESIRED POLITICAL OUTCOME USING A PHRASE BEGINNING WITH A VERB.)

PLAYERS	ISSUE POSITION	X	POWER	X	PRIORITY	=	(CALCULATION 1) PLAYER'S PRINCE SCORE
	-5 0 +5		1-5		1-5		
		X		X		=	
		X		X		=	
		X		X		=	
		X		X		=	
		X		X		=	
		X		X		=	

CALCULATION OF PROBABILITY:

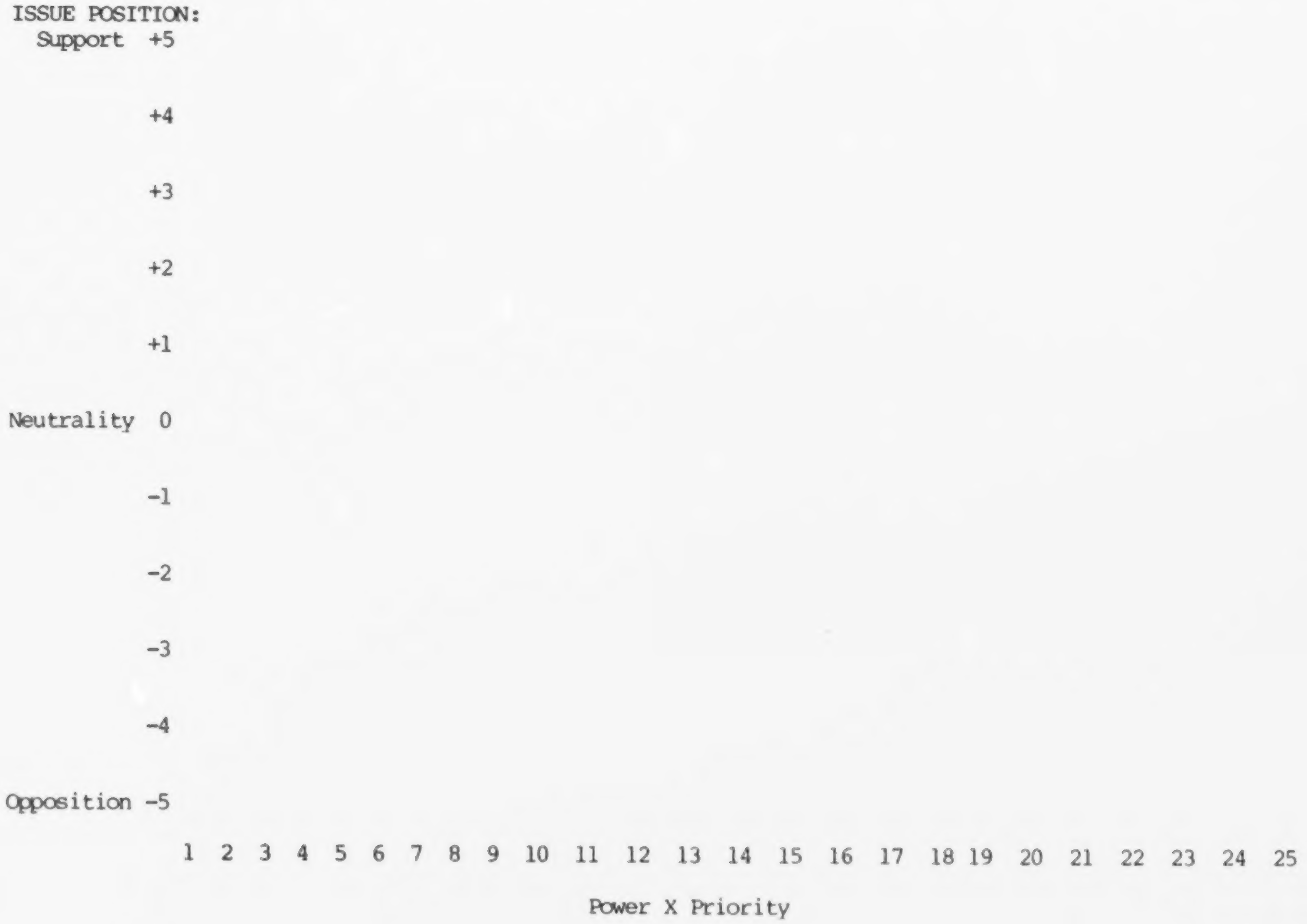
CALCULATION 2. SUM OF ALL POSITIVE SCORES PLUS 1/2 NEUTRAL SCORES =
CALCULATION 3. SUM OF ALL SCORES IGNORING SIGNS AND PARENTHESES =
CALCULATION 4. PROBABILITY OF SUPPORT = CALCULATION 2 DIVIDED BY CALCULATION 3 =

EXERCISE 10.5, Continued

INTERPRETATION OF PROBABILITY:

EXERCISE 10.5, Continued

C. CONSTRUCT A PRINCE POLITICAL MAP AND DRAW ARROWS SHOWING HOW PLAYERS WILL MOVE FROM THEIR ORIGINAL LOCATION TO THEIR NEW LOCATION ON THE MAP AS A RESULT OF YOUR STRATEGY.



SUMMARY

This chapter introduced the Prince System, a method for making forecasts and developing strategies for gaining the political support necessary to implement a public policy. The system can be used for any kind of public policy proposal. It requires that you have a thorough knowledge of the players who will influence the decision.

TABLE 10.2: REVIEW

CONCEPT	DEFINITION	EXAMPLE
Issue Position	Support, opposition, or neutrality that a player has on a proposed policy.	The President has +5 on his tax reform bill.
Power	Ability of player to influence the implementation of a policy.	Because the President can veto a tax bill, he has a 5 power.
Priority	Degree to which the player considers proposed policy important.	The President considers tax reform more important than any piece of legislation. He has a 3.
Strategies	Plan for changing the configuration of issue position, power, and priority of the players.	The President promises to help Congressmen who support him on tax reform in their reelection campaign.